Factors Influencing the Vocational Choice of the Educated: A Social Psychological Study of the Occupational Determinants of an Indian Sample

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CHAPTER-I

INTRODUCTION

The Problem of Vocational Choice:

The choice of an occupation is the outcome of the interplay of the individual's personality, the reality situation as viewed by him and the demands of this reality situation both social and economic. These factors (psychological, social and economic), basic and fundamental as they are, in the process of occupational choice-making, fall only at the periphery of three disciplines viz. psychology, sociology and economics, with the result that almost all these disciplines have neglected a thorough and systematic study of the process of choice-making.

"In modern society with characteristic division of labour, specialization of functions, exchange and prevailing ideology, the overwhelming majority of the people engage in an specific, relatively continuous activity in order to earn their livelihood and maintain a definite social status. This activity in the literature of social sciences is designated as occupation". Sals(1).

Occupation leaves its impression upon the inner being of individuals, affects vitally their life histories and serves as the link binding them to society. We can easily see the conglomeration of the three disciplines already mentioned, in the definition of Sals and can very well

expound that in impressing the inner being of the individual (1) it relates to the psychological make up of the individual, (2) in affecting the external life of the individual it relates both to (a) the economic side which yields him an income and a sense of security and (b) an status and prestige in the society to which he is linked up as a member.

In short an individual's occupation engages his attention and abilities for the most of his waking time. His adjustment, success or otherwise, on his job determines his place and prestige and conditions the whole responsive mechanism of his being. His work, as a matter of fact, is his whole life. A study of the sociological material on the topic reveals, even to the casual observer, the all important nature of work. Recent developments in psychology have led to the beginning of a separate field of occupational psychology, although apart and distinct from the movement of vocational guidance yet deriving its importance and inspiration from that applied branch of psychology.

Naturally the choice of such an important and all engaging activity of life, must be made in a systematic and scientific manner. Unfortunately, proper attention has not been paid to the process of occupational-choice-making. We do find some studies in the field, which have been reviewed in the following chapters, but no systematic large scale study has been undertaken in this area in our country.

Development of Guidance Bureaus in our Country is a thing of very recent origin. Although many a state Bureau has started working about ten to twelve years ago, the use and advantages of the Bureaus reach only a few. The very vastness of the scope of such a work is its limiting

aspect. We can say that in the case of a large majority of persons the choices are still made on the traditional pattern. Even if the facilities of guidance were available to every one, the present investigator believes that the more important aspects of the choice making process are the family traditions, conventions and values of the individual, the family and the society as a whole. A study of these aspects of the process will throw light on the procedures and practices of guidance itself. An individual cannot be considered as a mere bundle of certain abilities, rather, he must be viewed as a dynamic entity living in a society and coming from a particular family with specific background and values.

For this purpose it was thought proper to study the choice making process of those who had already entered a particular profession. How did they arrive at a particular decision? What was the part played by the occupational traditions of the family? What was the role played by the occupation of the father or the father-surrogate? How did the teachers influence the choice? What was the importance of the occupation of persons with whom an individual identified? What values (social, economic, humanitarian, sectarian etc.) influenced the individual in making a choice? How did his choice of school subjects determined his choice of an occupation? For these reasons, this writer considers the study of occupational choice as one of the first steps towards an analysis of an important area of the work problem in our country.

The educational preparation of a large number of persons in our country, to say the least, is aimless. University education, like the professions, is the god-inspired aim of our youngmen without regard to

intellectual abilities and previous academic record. A large majority of them comes out of the universities with a poor academic record and is forced to seek clerical or other ordinary jobs. These conditions also account for the acute problems of the educated unemployed. We have not yet paid our attention to this problem as we should have.

In modern society practically every individual, surely every male, and an increasing number of females, must choose an occupation. In fact, most individuals confront the problem at least twice, once for themselves, and again as parents for their children. Some persons, such as teachers, psychologists and counsellors, deal with the problem constantly as an essential part of their daily work.

There are societies in which there is no occupational choice. This is true of a primitive society where the division of labour is based solely on sex and status in the political or religious organisation, and occupation status is determined by inheritance or age. In more complex societies, a rigid and stable caste system provides another example. Here not only religious but social sanctions may compel the sons to follow in the foot-steps of their fathers. The Zamindari system of pre-independence India is another example. The Zamindars had very little freedom of occupational choice - still, only a few were able to enter the civil services, become soldiers or establish business etc.

One of the outstanding characteristics of democracies, since the beginning of modern capitalism, is the right of the individual to choose his work. This is in direct contrast to the totalitarian societies where

the state either tells the individual what to do or manipulates the economic system so that in effect he has no freedom of choice.

The basic resources of any society are the quantity and quality of the people who compose it. Some individuals inherit special talents and aptitudes and develop them through training. These talents represent rare resources, and no society can be indifferent about their utilisation. It is obviously important to an individual with a marked aptitude for mathematics that he may have an opportunity to develop it; it is also important to society that he makes use of such capacity. Because so few people understand the basic mathematics, physics, and engineering on which technological system can be built, the productivity of our economy is far below its maximum potential. When the demand for skilled personnel increases suddenly as in case of our expanding economy and the plans, the shortage of trained personnel becomes manifest.

Occupational choice affects both the individual and society. In every decision many people are concerned; there are parents who, being aware of their son's problems, try to solve them, although without much knowledge. There are teachers who directly or indirectly influence the pupil and pass judgments about various occupations and the way to prepare for them. There are friends and advisers who also influence his decision-making.

Various leadership groups are also concerned. In constructing curricula the leaders of the school system must ask themselves whether the subjects that are offered will materially assist the child to prepare for his adult role, including his role as a worker. The State and other

autonomous organizations like the Universities and institutes patronizing the arts and/sciences must decide the extent to which their funds should be made available to aid the poor but promising youngmen.

Individuals and groups have been concerned with these questions for a long time, but they have had to deal with them without a real understanding of how individuals do, in fact, choose a career. Most parents try both directly and indirectly to provide their children with a scale of values; they try to teach them about various goals in life, about the prestige which attaches to different occupations, and actions of parents and of educators influence the way in which individuals choose their occupation.

It must be remembered that the individual making such a choice is an adolescent, still developing, both intellectually and emotionally. Unfortunately, he must make his decision at a time when he is ill-fitted to do so. First, young people do not understand the complex nature of society, and, second, they are undergoing deeply emotional experiences which obscure their basic needs and desires. The stresses and strains of adolescence are many and confusing. Therefore, our study must recognize that many of the difficulties connected with occupational choice arise from the emotional turmoil which accompanies general maturation. This is also the reason for analysing the occupational-choice-making process as it occurred in the case of those who have already entered a profession; and it is thought to be more revealing - and hence the choice of the sample of this study - than that of those who are yet passing through the turmoil. The adult who has passed through the ordeal and has gained some experience in a

particular occupation is better equipped to have a retrospective view of the whole process and can pass judgments in a better way on the achievements and failures in a particular occupation than the adolescent.

Usually adolescent encounters difficulties in attempting to make an occupational choice and finds little help from home. This is partly due to the fact that so little is known about the forces that affect the decisions and the choice. If this basic knowledge does not exist how is it possible for experts to help? But there are many sectors of life in which the individual and the group are forced to act in the absence of adequate knowledge. People try to do as best as they can without it. Experts in vocational guidance utilize the information and knowledge at their command.

Recognising that an appropriate and satisfactory occupational choice can be made only if the individual considers his capacities, interests and goals - for failure to do so is apt to lead to later frustration - the vocational leaders have made use of various psychological techniques. But they know that a satisfactory choice always transcends the abilities and aspirations of the individual. The external environment offers opportunities, but it also imposes limitations. One of the major contributions of the experts is to bring the complex reality into focus and to help the individual to evaluate both his opportunities and his limitations.

Since there are relatively few vocational counsellors in comparison with the very large number seeking their aid, a process of natural selection takes place. Some individuals take the initiative and seek out the

experts, others are so patently floundering that they are recommended for guidance. Both groups are likely to receive attention and help. Experts in vocational guidance, particularly those whose work is centred in the various Bureaus for Educational and Vocational Guidance, recognise their obligation to contribute to the effectiveness of the large numbers who are confronted with the question of deciding about an occupation. To assist the many rather than the few is still a far cry in our country.

The process of occupational choice determination cannot be studied without recourse to psychological postulates that help to explain individual behaviour in the choice-making process. These are only now being developed. Occupational research, moreover, is only a recent development in the field of psychological enquiry. The fact that the study of occupational choice is really peripheral to the major concerns of psychology and economics probably explains why it has largely escaped the attention of the investigators in both the fields.

The relative neglect of the field can be further explained by the absence of recognised techniques for studying issues that transcend the boundaries of any one discipline. Raising such broad questions has many a pit-fall specially when there are no known methods that point to effective answers.

The present writer started with the assumption, and in this he had the support of most experts actively concerned with vocational

counselling, that there is a great waste of individual and social resources in the way in which individuals currently reach decisions about their occupations. There is waste in their failure to make the most of their own capacities, of the educational opportunities offered, of the many other resources that society makes available. But there seems to be little or no prospects of understanding the reasons for the occurrence of such waste and equally important, the steps necessary to reduce them, untill the way in which occupational choices are made is understood.

It is hoped that the findings, both by what they reveal and what they fail to reveal, will stimulate investigations into this complex but highly important process of how individuals decide about occupations - a decision of great importance to themselves and to society at large.

REFERENCES

(1) Salz, A., Writing on 'Occupation', in the Encyclopaedia of the Social Sciences, Volume 11, Page 434, The McMillan Company, New York.

CHAPTER - II

A BRIEF SURVEY OF RELEVANT STUDIES

Vocational Choice: When?

At what age do children first commence to recognize that they must some day earn a livlihood? At what stage in life do they make some definite vocational decision?

Anyone attempting to successfully resolve these questions must first alert himself to the fact that the age of the ultimate decision varies from individual to individual and is influenced by a great many variables, such as: personal intelligence, quality and quantity of guidance, socio-economic status, familial pressures, accessibility of direct and indirect vocational information, and contemporary economic conditions.

On the basis of the voluminous data which they have assembled, Lehman and Witty(1) - perhaps the most assiduous workers in the field of occupational research from the standpoint of quantity of material turned out - are fairly certain that by the time children reach the third or fourth grade they have already developed definite attitudes towards certain occupations. Formation of these attitudes depends largely on knowledge acquired informally and, according to these observers, is absorbed from such sources as attendence at movies, perusal of magazines and books, as well as eavesdropping on adult conversation. The extent to which early

vocational attitudes are based on actual knowledge is assumed to be very small. It is affective reaction rather than genuine knowledge which influences these early vocational attitudes. Nevertheless, the pair of researchers reemphasize that "definite and pronounced vocational attitudes appear early in children."

Sparling(2) is of the opinion that no proper age for making a vocational choice can be established for a group of individuals. He believes that choice is not at all dependent on age, but on the maturity of the individual and the knowledge which he has acquired with which to formulate a decision. Carter and Jones(3), studying tenth grade children in Oakland, California, came to a similar conclusion. "The child who states an occupational choice in the test situation is likely to be brighter, younger, more mature, more studious and less 'masculine' than children not able to state any choice."

Returning to Sparling(4), he offers the following breakdowns obtained from questioning a uniquely homogeneous group of 832 college men.

TIME OF MAKING VOCATIONAL CHOICE

AGE	%	AGE	%
Below 5.5	1.7	17	18.4
Below 12.5	12.2	18	15.3
13	4.4	19	6.1
14	10.4	20	2.8
15	12.7	21	.4
16	16.7	22	.3

Mean: 15.5 years Median: 16.1 years

To ascertain the time of making their earliest choices, Dyer(5) undertook informal interviews with 101 juniors, seniors, and graduates at the University of Kansas. Sixty made decisions before reaching college, while the remainder did not make their first choices until they actually attended college. These results correspond closely to the data compiled by Achilles(6) who found, in a study of 5,000 under-graduate men, that 60% had made a vocational decision prior to college entrance.

Of freshman men entering the University of Chicago in 1931, Gray(7) found that 67% had made a definite choice of vocation. Neuberg's(8) results at Wittenberg in 1930 had been similar in that he had found that 72% of the male freshman had made vocational decisions.

An exhaustive study of 2,819 men seniors in 37 Pennsylvania colleges was carried out by Threlkeld in 1929(9). In response to the query, "Since what year in school have you consciously made a vocational choice or preference about 65% gave college, while only 30% indicated high school. This was indicative of the confidence the students had in college as an agency which would aid them in solving their vocational problems.

When one attempts to compare the figures noted above, one must realize first that the looseness with which the terms vocational "choice", "decision", and "preference" are employed in inquiries of this sort, influence the variability of results to a large extent. To account for the wide range encompassed by these findings, from Threlkeld's results of 35% of male college freshmen to Sparling's 89%, one need also remember the wide variation in types of colleges, the type of students a particular college attracts, and

the different samplings from year to year.

In his research, Threlkeld(10) went one step further than most students in the field, by breaking down a sample of his total group into several occupational choice categories. With regard to the time of decision to go to college, he found that a larger segment of students in the business category made their decision in the senior high school year than any other group. Potential lawyers and physicians made their decisions more at the inception of their high school educations. It is possible that many of the legal and medical hopefuls come from homes with professional connections On the other hand, the business category may have been composed of many children of tradespeople who themselves had not been college students, and who had not discussed the matter a great deal until, when their children had become seniors in high school, they made the decision to send their offspring to college.

About the time of vocational decision, Threlkeld found that it was earlier in law and medicine than in any other occupational category. This may be due to the influence of the parental environment from which they have come.

What percentage of college men who have achieved senior status have, by that time, not as yet chosen a vocation? Strong(11) reports that 24% of Stanford seniors gave no occupational choice a short time before graduation, while an additional 12% were not sure; a total of 36% who were not sure. A summary of investigations dealing with this subject by Spencer(12) corroborates the

findings of Strong; typically more than one-third of those approaching college graduation are without what might be termed definite plans for their work.

Stone (13), however, believes that "saving one's face is a factor. Saying one is going to be a lawyer receives popular approval but not that one is going to be grocer. It is evident that some 'don't know' responses are given in order to cover up a project which receives no social approval from one's classmates. Aside from a variance in the significance to be attached to a student declaration."

What Spencer (14) considers to be the most prevalent reasons for the lack of occupation decision among college seniors are the following: a secure financial position which doesn't make employment urgent; lack of mental/er emotional maturation; inability to analyze one's own abilities; ignorance of employment opportunities; absence of any challenging occupational interest; and the pursuit of a curriculum which offered no vocational vistas.

At this point, it might be worthwhile to make mention of the study of Super and Wright(15) concerning the effects of the economic depression of the '30's on occupational choice. The authors surveyed three groups; the 1928, 1933 and 1935 graduates of a particular high school. Their data reveal that the average age of choosing a vocation rises from 15.5, for pre-depression graduates to 17 for depression graduates, to 18.9 for the post-depression group. This, the authors feel, evidences the unsettling effect of economic inactivity, since lack of assurance about family finances

and occupational openings makes vocational selection much more difficult.

Mackaye(16) studying boys in a rural district in California develops the hypothesis that a fixation of vocational interest occurs in the development of personality earlier in a low type of mentality than in a high type.

Proceeding to a detailed examination of the occupational choices made in the eighth grade, Mackaye uncovers materials which apparently corroborate his hypothesis. For example, there were quite a few who neithter sang well nor played an instrument who expressed music as their vocational choice. And in most cases it was discovered that they came from families in which some member, having had some ability, had attracted attention to himself.

Early fixation on engineering, aviation, and forest ranging had its origins in the love for excitement and adventure, and was rarely accompanied by any knowledge or investigations into these occupations. Fixation was typically due to advertisement of correspondence schools in cheap magazines which emphasized high pay, a minimum effort in learning, travel, and excitement. The choices had no relation to ability, and were closely akin to the day-dream life of the individuals concerned.

The choice of mechanics in this particular district is in a class by itself. In the great majority of cases its selection is traceable to a reaction against farm life. Students from poor to high average intelligence whose home activities had been restricted to routine tedium of dairy ranching "ever since they can remember" adopted any means of escape which

seemed plausible. Typically, their only by-experience was with the family car or tractor. Since they have a feeling of familiarity with their motors, they tend to select auto-mechanics as their vocations. This approach is evidently encompassing the largest single group of cases each year.

But some boys still choose farming. It is usually the choice of those whose experiences at home have been pleasant and whose parents have counselled wisely. Where these conditions did not prevail, and farming was still the choice, it was subsequently found to rest on an autistic life on a cattle range, where the boy visions himself as continuously "in the saddle". The range is always "in the mountains". Incidently,no boy making a farm choice of the first variety has left high school, and no boy making a choice of the second sort remained in high school after his second year.

From his seemingly intensive investigations, Mackaye emerges with the following conclusions:

1. Early fixation of interest is an abnormal condition and its usual concomitant is low intelligence.

2. The ability to break down or alter an interest is inversely correlated to low intelligence; the higher the intellect, the more facile the reintegration of interest.

3. Normal fixation takes place at about the age of fourteen and is concerned with occupations within the experience of the individual; but always subject to later change.

Before leaving the subject of age in vocational choice, there is a

pertinent passage from Adler(17) which should be included: "A mother is the first influence in the development of her children's occupational interest. The efforts and training of the first four or five years of life are decisive for the child's main sphere of action in adult life. If ever I am called on for vocational guidance, I always ask how the individual began and what he was interested in doing his first years. His memories of this period show conclusively what he has trained himself for most continuously; they reveal his underlying scheme of apperception."

"In many instances, no doubt, the child continues to develop unaware of these subtle influences that continue to find expression in his acts and decisions. Suddenly there may come an inciting moment, some experience so fully in accord with these deeply planted neural patterns that an occupational concept in terms of his own interests and desires takes sudden and clear form in a youth's consciousness. 'That', he will say later, referring to the experience, 'was the reason why I decided to enter this vocation'."

One final reference to the age factor should be mentioned. Among many writers on the subject there has developed a biological theory; a theory which although lacks the essentials of adequate validation, has found numerous advocates in the literature. With the onset of pubescence, marked changes in vocational attitude occur according to investigators Lehman and Witty(18). They believe it to be evident to students of psychology that changes in vocational attitude neatly parallel sexual maturation and are probably due in part to this biological process. "One fundamental fact disclosed by the present study is that children's vocational attitudes mature

relatively rapidly after the onset of pubescence. Which attitude will seem to be largely a matter of environment." Lehman & Witty (19)

What Jobs?

To which vocations do young men aspire? Given an opportunity to verbalize their vocational ambitions, which occupations do they choose? In the answer to these questions we have, for the first time, veritable unanimity in the results and interpretations of all the investigations into the subject. All studies have shown that the occupational choices of high school students concentrate in the professions. There exists an unequivocal tendency for youth to aspire to occupations in the upper portions of the socio-economic scheme. Not very strange is the fact that they tend to select vocations which are generally regarded as desirable, which carry a high degree of social prestige, reward the individual with the highest salaries, and require the most education. Boys want to be engineers, lawyers, doctors, businessmen.

As will be evidenced throughout this section, most youths tend to constrain their vocational choices to comparatively few occupations. Menger's(20) results are representative. Although, as she points out, there are thousands of different vocational possibilities to day, the average number of occupations chosen by the elementary school grades were 70; for high school the average number was the same; while for colleges the average figure took a sharp dip to 37. Regarding all the age groups as a single entirety (9,425 boys; grades 3 to 16; ages 6 to 23), Menger

found a cluster of 26 occupations chosen by more than 1% of the group, and 82% of the total choices were concentrated within this small group of 26 favoured occupations. Two of the occupations, engineering and aviation, enjoyed a selection rating of more than 10% each. While the widest spread of choices occured in the ninth grade where only 53% chose the ten most popular occupations within their group, 87% of college senior men fitted themselves into the ten most popular occupations within their group.

Phenomena which merit attention are the waves of occupational interests, found by numerous investigators(21), which to a large extent are reflections of the social situations. There is little doubt about the influence of contemporary interest patterns and the conditions of the time on occupational choice trends. An illustration would be the large number of boys who would like to be aviators. Although studies fail to find that the pattern of vocational interest alters sharply from year to year, over a longer period of time the changes are quite radical. As Vernon states(22): "There were also waves of fashion in careers and occupations..... These fashions exerted considerable influence on the direction of choice."

One observer(23) attributes these waves largely to high pressure advertising about the advantages, future opportunities, glamour, and seemingly professional nature of a new field which often attracts those with cravings for status. Thus, there are waves of ambitious young men who are eager to enter the field of air conditioning, diesel mechanics, radar work, television, (and now, perhaps, space-men etc).

What are the most popular occupational choices? Again, Menger's(24) work is fairly representative of all the studies. The most popular choice in the elementary grades was aviator; in high school it was engineer; while in college, choices of physician dominated. (Sample of 9,425 boys used).

Do the popular occupations persist? "Engineer, physician, and lawyer continued to be popular from the third grade through college"(25). Aviator was popular mostly among the young boys; education first becomes a popular choice in later high school and college. Such occupational choices as journalist, broker, dentist, banker, and religious worker are popular solely with college men.

Closely corresponding results were turned in by Lehman and Witty (26). Using a questionnaire their results showed that 70% of the boys aged eight and one-half chose to be cowboys. From grades three through six, aviator was the most popular choice; but from the sixth grade on there was a consistant decline in popularity. In the third grade, aviator garners 23% of the choices. In the twelfth grade, only 4% of the choices are allocated to it.

Engineering was the second most popular occupation in the elementary school, but in high school it became most popular. Physician is third in popularity in elementary school; its popularity grows throughout high school until by the sophomore college year it attains the peak of its popularity. However, a decline sets in after the junior year because by this time most

of the selectors are either in medical school or have been forced to change their vocational choice.

There is, thus, evident an ebb and flow in the popularity of vocations throughout the grades. Occupations that are overwhelmingly popular in the elementary grades practically disappear as choices in the higher grades, while occupations not at all represented or moderately popular in the early years flourishing in popularity as the students advance further in school.

Every investigator in the field has discovered that vocational choice among high school students, regardless of their location, centers largely around the professions. In all surveys the professional category has many times the number of adherents as the next leading vocational category.

Surveying a sample of New York State schools(27), it was found that 53% of the boys chose careers in the professional and managerial fields. First choice, as expected, was engineering, followed by aviation, and "running a business". When those with I.Q's. above 115 were segregated, less than 6% chose occupations outside the professional category. In general, the majority of all the students regarded all occupations other than professional careers as mere methods of earning a living.

A study of 1,200 elementary school pupils in a working man's neighbourhood of mechanics and skilled tradesmen in New York City revealed that 50% chose clerical and professional work(28).

Summarizing the results of various studies, Schrammel(29) reports that an Illinois survey of high school seniors disclosed that 30% of the boys chose engineering. Skilled manufacturing and mechanical work was chosen by only 5%. Engineering was also chosen by 31% of high school seniors in a survey of Indiana.

In Chicago, too, there was noted the same concentration of interest in a small number of highly competitive occupations(30). Engineering was the selection of 25% of high school students, followed by aviation, with 21% of the students claiming to be its devotees. Illusory aspirations were not confined to any particular grade, nor did the situation change over the four years in high school, the choice in the twelfth year differing only inconsequentially from those of the ninth year.

Is urban or rural residence a measurable influence on the type of job desired? At Louisiana State University, Sisson(31) found that engineering was the choice of 42% of the entering freshmen from the cities; of 32% from the towns; and of 20% from the farms. The very large number of men who chose engineering at the time was a reflection of local environmental conditions; the region was experiencing a period of rapid industrial growth and exploitation of its resources. It was Sisson's belief that, on the basis of his study, rural or urban residence was an important conditioning factor in the vocational choice of college men.

Beeson and Tope(32) found that while, in their study of high school students, the majority of their fathers were farmers and businessmen(63%),

only 20% of the boys desired to follow these occupations, whereas 23% chose engineering. Another study(33) made among rural high school pupils in New England showed that the professions attracted the greatest number of students whose parental occupation was farming. Menger(34) was of the opinion that the outstanding conclusion of her study was that rural and urban boys favour, in general, similar vocations. There are slight differences, but these are ascribed to the heavier weighting given farming by rural boys. This result is to be expected, however, since most of their vocational experience has been in agricultural pursuits.

The pressure of culture on occupational choice is apparent when we turn to a study conducted in Soviet Russia(35). Of the younger boys, 20% wanted to be technicians, while a full 43% of the older boys aspired to positions as technicians. Borisov attributes the sharp rise in percentages to the fact that the occupations of parents are more influential in the younger child's choice than in that of the older children.

How Permanent Are Vocational Interests?

Contained in many of the studies set forth in these pages is evidence to indicate that through the elementary grades and through high school, at least, there are periods of changing interest through which youths pass in their exploration of life. That early occupational choices are not deeply grooved should be regarded as a very wholesome situation. The enunciation of an early preference is an invitation for the individual to explore.

Dewey(36) writes of these shifting interests most plausibly. He says

that discovery of capacity and aptitudes is a constant process as long as growth continues. One discovers in himself, say, an interest, intellectual and social, in the things which have to do with engineering, and decides to make that his calling. At most, this only demarcates the field in which further growth is to be directed. It is a sort of rough sketch map for use in the direction of further activities.

Investigations of vocational interest have utilized one of several criteria including: verbal statements of vocational choice, results of interest inventories, reactions to work projects, persistence during periods of training and the actual entrance into an occupation.

Early studies furnished the basis for a general belief that vocational interest of young people are unstable and unsubstantial. More than thirty years ago(37) Frayer summarized the results of all the investigations to that date. Citing averages based on the work of various researchers, he reported that over a one-year period the vocational interests of youngsters were stable in 37% of the cases, and over a four-year period in 26% of the cases. In conclusion he says that there may be considerable change of interest in mental life. The change factor is as important as the permanence factor in the development of interests.

Typical of the early investigations is the frequently quoted Franklin study(38) made in the early twenties. A group which included 708 boys in Baltimore junior high schools were quizzed about their vocational choices. From December to May the stability of vocational choices was guaged at 58%.

This, the author thought, was fairly high when compared with the results of three other interests which were measured during the same period: favourite studies were stable in only 36% of the cases; favourite kinds of entertainment in 41% of the cases; and favourite kinds of activity rated 29%. It was also found that vocational choices changed only very slightly during the summer vacation. These interests were either not considered during the vacation or the activities and environment during the vacation were not conducive to change.

Strong, in his studies of permanence of interest, made a significant distinction in the definition of vocational interest. He agrees that most studies prove little permanence if one's criterion is "the occupation an individual likes best now", but that there is startling stability when vocational interest is considered as "the sum total of all interest that bears in any way upon an occupational career."(39) The term "interest" has been used to indicate specific reactions, such as stated liking for book-keeping. But, thinks Strong, there exists a constellation of seemingly distinct interests - a basic interest - which can grow, or be channelized into other groves by circumstances, but nevertheless retains the same core of interest. Innumerable instances can be thought of where a given type of work is chosen because of the urge to "work where I can express myself", "work with children", "work with people", "work with books", etc. The motivation behind these expressions are termed basic interest urges.

It is when these clusters or constellations of interest are examined that we find a high degree of permanence, according to Strong. Each

occupational group has characteristic sets of likes and dislikes that differentiate it from other occupational groups. It is unusual for an individual to change within the constellation. An example of what Strong probably means by his occupation constellations might be supplied by the teaching profession. Generally, there is no specific pattern for a teacher. An aesthetically sensitive young teacher may be closely related in interest to artists and authors; a social minded teacher to social workers; commercial teachers to stenographers. It is within these occupational constellations that individuals possess various differentiating personality traits which influence their vocational choices.

On the basis of his investigations, Strong(40) concludes that specific interests are stable between the ages of twenty-five and fifty-five and unstable before that time. Nevertheless, interest patterns are surprisingly stable from the age of fifteen on.

Although Strong's technique has limitations, as pointed out by Hapock(41) and others, it provides a usable approach to the study of the vocational interests of the individual, provided the test is used in the context of clinical interpretation rather than as a purely statistical procedure. Carter(42) aptly points out that for an adolescent a high score on a scale of the Strong Vocational Interest Test for Men, does not necessarily mean that his interests in that classification are fully developed and stable. It means, rather, that some of these interests are at times dominant in his thinking or behavior. It also indicates a strong probability, not a certainty, that he will have the same interests a

year later.

Most investigators using the Strong Blank have consistently found that during high school years and the years immediately following, there is little indication of systematic increase or decrease of scores. Interests do undergo some change but much fewer than might be expected. In addition, we may assume that a number of young people are confused and their vocational motives are unintegrated. Thus some of the interest changes that do manifest themselves really involve organization and integration, and are dependent upon experience and application of learning; they are not merely the product of chronological age changes.

Another approach to permanency of vocational interests is proferred by Culver(43). He is convinced that vocational interests are, qualitatively, of two distinct types. "The interest may be direct or primary in character; that is, an individual may be primarily interested in the job itself ..... On the other hand, the occupation may satisfy interests of an indirect or derivative character. Although the work involved may or may not be pleasurable, the satisfaction gained from the indirect outcomes may be sufficiently attractive to lead the individual to pursue the occupation." When Culver was able to segregate his subjects on the basis of direct and derivative choices, those of the former group showed greater stability of choice.

Evidence is also available to indicate that stability of occupational choice depends to some extent on the priority a particular choice enjoys with the individual. One short-term study, for example, found that the percentage of cases where there was persistence in naming a third choice

in occupational preference was only one-half that for the first or second choices(44).

Decision Making & Individual Differences:

Is the presence - or absence - of a vocational decision of a student correlated with any tendencies in the personality structure of the individual? Most of the authoritative studies yield just such an indication.

In Birmingham, Alabama, an inquiry among the seniors in all the white high school students in the city disclosed statistics, which when analysed, indicated that there are 77 chances in 100 that boys with vocational decisions are more intelligent than those without; those with vocational decisions surpassed, those without, in educational achievement, as objectively measured, in 96 cases out of 100(45).

Hartson(46) tells that in his college 73% of the four-year scholarship holders on the basis of competitive examinations, selected their vocations before entering college, percentages considerably higher than for those who were vocationally undecided. In a survey of 4,257 college men undergraduates there was also found a positive relation between vocational decision and scholarship(47). Of the men who made vocational decisions, 41% were above average and 7% were below average scholastically, whereas in the undecide group only 26% were above average and 14% below the average. At Long Island University, Sparling's(48) intensive research revealed an extremely significant statistical difference in the academic averages of those who had chosen

vocations and those who had not.

A more thoroughgoing study of this problem was made by Franklin and Marshall College(49). The study encompassed 270 entering male freshmen. Each student was interviewed in each of his eight semesters at the school.

First it was discovered that in the typical freshmen class one-third of the students enjoyed definite vocational choices; one-third possessed tentative vocational choices, and the other third were undecided. It was later found that the proportion with definite choices increases and the percentage of those who are undecided shows diminution. But even in the final semester, 14% remained undecided.

Concerning the dynamics of this group, the author states that, in general, those with definite vocational choices rank relatively mediocre in academic aptitude, but academic performance, as measured by grades, is mediocre and high. While they placed lowest among all three groups in psychological examinations in five of the eight semesters, they were lowest in grades in only one of eight semesters and stood highest for the last two semesters. "Evidently some factor operates to compensate for their relatively low academic ability. It may be the incentive of a goal."

The group with tentative choices ran high in both academic and in college grades. They were the highest group in the psychological examination in every semester, save one. They achieved the highest grades in the first six semesters; in the last two they fell behind the group with definite choices.

Relatively mediocre or low in academic aptitude were those in the undecided category. Their academic performance was even lower when compared to the other two groups. In academic achievement they stand lowest each semester, save one, although in ability they ranked in the middle for four of the eight semesters and were on top in one of the semesters. Thus, their academic results are poorer than measured academic aptitudes would justify.

Generally, also, relevant investigations have tended to reveal that college students with vocational choices, when compared with those who are vocationally undecided, have worked more and earned more money. Sparling(50).

In a study at Yale University in which he differentiated five groups of students, Crawford(51) also found a definite relation between scholastic records and life purpose. "Those who come to college with some definite aims ..... and who kept their aims in mind, made definitely superior records. Those, on the other hand, who have no such purpose made distinctly lower records."

Social psychologists Katz and Allport, after investigating several colleges, state: "Vocational adjustment goes in some measure with general adjustment to the college situation; for the schools which had the greatest number of students seriously interested in studies seem to be the schools in which the students were relatively certain in regard to their life work." They go on to relate: "In our study of Syracuse students it was apparent that definiteness of vocational decision was a major factor in student's orientation toward college life. On the whole, the students who had

definitely decided upon their vocations were the students who stressed scholarly as against social values, who were less disturbed by other personal problems, and who reported a smaller degree of cribbing."(52)

An interesting item turns up in the case studies done by Sparling(53). The most significant revelation of these college case studies is that the great majority of the students who were vocationally undecided had been thwarted in their real desires. They had once chosen a vocation, but were unable to realise it for some reason or other, and had since failed to make a subsequent choice. However, there was a minority of talented students in this group who had sufficient ability to succeed in the so-called "higher vocations". The lack of ability to pursue the vocations they would like to follow was admitted by 34%. No funds was the reason extended by another 28%; while only 4% gave parental disapproval as the reason for their lack of choice.

Intelligence and Vocational Choice:

In Witty and Lehman's(54) study over 13,000 boys were distributed into three separate groups on the basis of I.Q's.: Bright (110 and above), normal (90-109), and dull (70-89). A control group of boys of all ages, who were not rated as to intelligence, was also employed. All the boys were then quizzed about their occupational choices. The result was that in more than 90% of the cases age differences were found to be especially meaningful

in vocational choice, the attitudes of the brighter boys were similar to those of the older unselected boys; and the dull boys' attitudes resembled those of the younger unselected boys. In less than ten percent of the cases was this situation found to be lacking.

Perusing the data collectively, one notes immature attitudes on the part of dull boys (they thought these occupations to be the best money makers: sherrif, policeman, cowboy, book-keeper, wrestler) and relatively mature attitudes on the part of the bright group. Dull boys seemingly chose occupations somewhat indiscriminately. This was also characteristic of boys of a younger chronological age. In general maturity of response was associated with mental age in all sections of the study.

The researchers believe, on the basis of their findings for the control group of unselected children, that children's attitudes toward various vocations are acquired "in much the same manner that other learning is acquired - by a rather long process of trial and error".

The above researchers noted in passing that many dull boys were just as articulate in voicing their expectations of entering the professions as were the brighter boys. Practically all sources which treat of this topic agree that an individual's low intelligence in a startlingly large number of cases does not mean that his vocational choices follow a pattern different from his superiors in intelligence. These were also, the results, for example, in a study of 708 Baltimore junior high school boys by Franklin(55) who were

distributed into five groups according to decile rating based on I.Q. :-

	Percentages of vocational choices				
Decile	Highest	2 & 3	4,5,6 & 7	8 & 9	Lowest
Professional	59	64	55	43	31
Trade	11	9	10	11	19
Mechanical-Industrial	15	17	22	29	39
Clerical	8	4	10	12	8
General Service	6	2	1	4	3

The percentage of professional choices is fairly constant in not only the two upper groups but also the large mediocre group; and it is still 43% in the eighth and ninth decile.

Originally, in studying the gifted children while still in elementary school, they displayed a greater preference for public service, professional, and artistic careers in comparison to a control group of average children who showed a greater preference for mechanics, transportation, and clerical work. In general, the gifted boys selected occupations which required intellectual activity. Also there was found to be less distance between the occupational ambitions of the gifted children and the occupational status of their fathers than was revealed in the case of the children in the average control group where, often occupational expectations were extravagant in relation to the intellectual level of the children. Terman(56).

Another investigator(36) Grace(57) concludes from a study of his that the more midiocre the ability, the greater the height to which adults aspire and the less do they desire to climb the ladder gradually, but rather think in terms of skipping over certain rungs. Also, he found that the greater the mental ability, the greater the tendency for the individual to seek further advice.

Personality & Vocation:

Although many studies imply that vocational preferences are partly determined by personality traits of which the individual may be only partly conscious, still, studies which examine the problem directly are few and far between. An inadequacy such as this in the literature is unfortunate in view of the fact that the fundamental value systems are at the root of most vocationa interests.

A prime difficulty, of course, is that the requisite studies do not lend themselves to mass or statistical treatment. Different drives may operate in different individuals to produce the choice of an identical career. Similarl the same or extremely similar drives may produce in different individuals careers of divergent nature. To determine any causal relationships between personality, drives, and careers, a sizeable fund of knowledge concerning the individual is absolutely necessary.

Various students in the field in the past have essayed statistical investigations into the subject with methods and results which are not very meaningful. In one such study, for example, of three thousand men located in eighteen colleges, the following results were obtained on the basis of paper-and-pencil personality tests; the most conservative individuals chose to be bankers, dentists, musicians, and government workers: those with liberal attitudes were expected to enter journalism, law, and agriculture: those with the most religious attitudes preferred the ministry, music, and teaching while the least religious chose aviation, journalism, law, and commerce. Nelson & / Nelson(59).

In a study, Lentz(59) after scrupulous statistical analysis of his data, asserts that it "may be concluded that there are distinct and significant relationships between vocational preferences and opinionaire

items and that to some extent vocational preference is a function of character." Lentz, for instance, found that those who would like to be athletic directors, are more militaristic, more amenable to discipline, and naturally more interested in athletics than those who expressed a dislike for the occupation. He thinks(60) that over a period of time additional correlates should increase our insight into the psychological aspect of vocational preferences and aid in the answering of the question, "What kind of personality is attracted by what kind of vocational label?"

About the subject of personality, another quotation from Termen(61) might be appropriate. "Contrary to the Lange-Eichbaum theory that great achievement is usually associated with emotional tensions which border on the abnormal, in the gifted group success is associated with stability rather than instability, with absence rather than presence of disturbing conflicts - in short, with happiness of temperament and with freedom from excessive frustration."

Incidentally, it should be recognised that personality factors often enter to distort the compilations of numerous vocational investigations. A certain inner security and frequently some status among one's fellows is secured by making a verbal statement of occupational choice and advertising this fact(62). This is notably the case in individuals who are sensitive to the prestige aspects of occupation and those who have some need for recognition which can be satisfied by identifying themselves with a given type of vocation. The choice is usually exclusively verbal in order to impress others.

Father and Son:

Sisson(63) has found that among the fathers of the men students, one-third were in the professions, one-half were in executive, clerical or sales positions in business and industry, and one-tenth were designated as workers. This pattern is in marked contrast with the occupational ambitions of their sons; 83% chose the professions, and only 13% of the sons elected business. The sons as a group anticipated careers ranking higher socially and intellectually than those which their fathers were pursuing. If the occupations of the fathers and the vocational choices of the sons are given Barr Taussing ratings (i.e., relative values assigned to vocations on the basis of intellectual development necessary for success), only 16% of the sons choose vocations requiring less intellectual ability than their father's occupations; 14% the same; and 70% aspire to positions which should demand more intellectual capacity.

North Carolina State College prepares students for specific vocations, especially in the field of agriculture. While 41% of the students have fathers who are engaged in agriculture, only 12% hope to return to the farm. On the other hand, whereas practically none of the fathers are engineers, 23% of the students expect to enter this profession. Questioning disclosed that most mothers and fathers did not make positive suggestions which register consciously in the minds of their sons regarding vocational careers. In fact, no student stated that he chose a vocation because of parental suggestion. However, Anderson(64) confesses that further study might reveal many negative suggestions that might cause the individual to

turn away from given types of occupations to other types of work.

Results of the majority of these college surveys would indicate that male students choose the specific vocations of their fathers more frequently than can be accounted for on the basis of chance; and the statistical correlation between father's occupation and students' vocational selection is low, but positively significant. Nelson(65).

Among elementary school children in California, an investigation was conducted by Bedford(66) in three different environmental districts. As might be expected, boys who came from districts predominantly composed of business and professional man showed a marked preference for the general vocational groupings into which their fathers fall (though not necessarily their specific occupations). In the poorer district, made up of labourers, the children gave their fathers' occupations as second choice. Evidently they were more hopeful in their first choice.

A numerically extensive inquiry by Kroger(67) disclosed that very few high school pupils wished to pursue the occupations of their respective fathers. About 70% of the boys assert vocational choices in categories higher than those of their fathers; 15% in lower categories; and about an equal percentage on the same level. Again, however, it was found that the sons of fathers in the higher occupational classes are most frequently choosing vocations at the identical level as their fathers.

There must be recognised, however, a clearly visible fluctuation in the correlations between fathers' occupations and sons' choice. Willard(68)

found that the greatest number selecting their fathers' occupations was at the age of thirteen. From that age on there was a steady increase in independent choice.

A study by Ritchie & Valentine(69) revealed a definite decline in frequency with which father's wishes or occupation were mentioned above the age of fourteen as a reason for vocational choice. Again, in a group of American high schools there was a larger percentage of boys who chose their fathers' occupations in the ninth grade than in any other grade. In the twelfth year the proportion was smallest. The researchers believe that this signified that the students are doing some thinking for themselves instead of passively preferring to follow the occupations of their fathers. Beeson & Tope(70).

Undoubtedly the most comprehensive study done in this connection was accomplished at Long Island University by Sparling(71). What was the nature of the vocational choices of the male student population? Medicine and dentistry accounted for 77.7% of the choices, while teaching and law each drew 9.6% of the students. Thus, about 96% of the total student body chose one of these four professional vocations. Business attracted merely 1.4% of the men.

Upon scrutinizing the data, it was manifestly evident that the occupations of the fathers of these students had no positive influence on the latter's choices. Among the fathers 44% were engaged in retail selling; 23% in the skilled trades; and 11% in manufacturing (6% were in clothing industry, and 12% participated in food distribution). Over 97%

of the fathers were engaged in occupations for which no college education was required; only 2.5% of the fathers were engaged in the four vocations into which 96% of the sons wished to enter. A dissatisfaction among a high percentage of fathers with their own vocations, Sparling states, may be one of the reasons for their making sacrifices to secure "something better for their children."

With respect to the education of the parents, the average grade completed by the fathers was 8.8, and for both parents the average stood at 8.5. Over 14% of the parents had no education at all. It is possible, opines Sparling, that parental insistence on education for their children, in his study, was heavily influenced by their own limited educatdon.

To determine how far the men were attempting to reach above their parents, the average social status of the vocation engaged in by the father and the average social status of the vocation chosen by the student were computed according to the Counts Scale. The results showed that the average student aspires to a position sixteen vocations higher in the gamut of social desirability. Not a single case was recorded where the son chose a vocation lower than that of the father.

Personal interviews disclosed that there were many conflicting traditions in the households, and that chief among these was the old institution of parental autocracy. Conflict usually becomes a factor when the students encounter the ideals of self-expression and self-direction. Nevertheless, parents insist that their sons become doctors, lawyers, etc., the highest vocations known to them; many students obediently and blindly

assume for themselves the wishes of their parents. Sparling is convinced that these parents insist that their sons enter the professions which have the highest prestige value. Students frequently say that they would like to pursue a vocation other than that selected by their parents, but they tend to feel overly indebted or closely attached to their parents to "wish to disappoint them."

Other Influences & Pressures:

When students are required to answer, "Why did you choose this occupation?" the most commonly registered answer in practically every study is "I like it", or something closely akin. Katz and Allport (72), for example, instructed students to check off three items from a list of reasons. "Like for particular work" was checked by 82%; 45% mentioned special abilities, and eighteen other reasons were checked by 30% or less.

Investigations among different groups of high school students reported by Neuberg(73), Beeson and Tope(74), Cohen(75),

and Crapullo(76), all indicate as the top-ranking reason for vocational choice a "liking" for the work. Graded secondary were such reasons as a feeling that the work suited their special abilities, and the advice or example of relatives or friends. A study of the occupation itself received practically no mention in any of these investigations, nor did more than a minute percentage consider the intellectual interest for the vocation.

Reported by Thralkeld(77) is an investigation at the University of Buffalo which utilized some sort of breakdown. Because they claimed it fitted their interests and temperament, 75% chose the professions and business, and 82% selected engineering. Earned incomes were the consideration with 49% of the business students, whereas it was allegedly a consideration for only 27% of those who chose engineering, and for only 22% of those who planned to enter the professions. Service to the community was claimed as a consideration by 51% of the professionals, 17% of the engineers, and 11% of the business group. When interrogated as to whether their desires grew out of childhood aspirations, 30% of the professional group, 23% of the engineers, and only 11% of the prospective businessmen returned affirmative replies.

Bedford(78), too, discovered that responses to questions about the background of vocational choices were almost invariably, "I am interested in it", or "I like that kind of work". Very few indicated that anything resembling serious thought had been given to the choice of a vocation.

Choice of a vocation appeared to be determined more often by prejudice, sentiment, and tradition than by anything else.

In some cases, where "it interests me" is given as the reason by the subject, there exists genuine interest, but in many cases the choice is attributed to "interest" because the subject fails to think of any better response(79). Also, as Cunliffe(80) points out: "It is rarely if ever clear what a student means by this (interest) or what the basis of interest is." The same source, incidentally, comments on the fact that in his study, less than 3% of the high school students mentioned "study of occupations" as a factor in making their vocational selection.

Willard(81), upon more intensive investigation, learned that pecuniary reward was the most cogent motive when "like it" governed the vocational decision.

In their study with pre-depression and post-depression high school graduates, Super and Wright(82) found that in both groups "interest or ability" was the reason most often indicated, but this item decreased from 73% to 50% with the depression, as a result of economic pressures. During the period of economic inactivity, opportunity for employment played a more and more significant role as the basis for occupational choice.

That the pressures behind a vocational choice vary not only with individuals, but also with geographic location and contemporary economic conditions is clearly implied in several investigation(83,84) carried out in England. The notation "only job available" was overwhelmingly the

principal reason indicated for vocational choice. The ease of getting a job, or the actual offer of one was by far the main motive for boy students. "We are forced to conclude," say the authors, "that the great majority of those young people were compelled from sheer necessity to take the first job that offered itself". ~~And this in 1927, without any depression.~~

In general, most studies seem to indicate that young people tend to choose occupations which are highly paid, socially approved, unusual and romantic, much publicized, and remote from their own experience. Also, socially preferred occupations tend to attract many students of inferior intelligence because they yield more easily to pressures, especially when applied by parents and friends. "Apparently", as Bedford(85) ~~one observer~~ states, "the less the student knows about the actual requirements of the occupation, the firmer his belief in his personal fitness for the work".

Part-time employment rarely functions as a means of vocational exploration except perhaps in a negative way. A very small percentage of boys, in all surveys, chose occupations in which they had experience as part-timers. In general, too, extra-curricular activities are only remotely connected with the world of work. Among boys the leading avocational interest is athletics, while dramatics and music follows far behind. Neither is reading among high school boys linked in any way to vocational choices. Most studies which treat the topic reflect a desire to escape from the problems and responsibilities of vocational life. Easily the most popular category is fiction.

General vocational interest is often deflected by a number of personal

circumstances. Relatively small matters can change the development of the the vocational history of the individual. For example in one college study(86), these are a few of the factors, collected from some of the case histories reported, which influence an individual to choose a particular vocation or to forsake a prior choice: ill health or physical defect; discouraged by brighter member of the family;" the thing to do; to remain at home because of illness of parent; change of plans when father died; uncongenial home life; lack of money; suitable opening near home; high starting salary causing abandonment of prior choice; parents and friends take it for granted (accepts uncritically); and even a change in the college curriculum bringing about the dropping of a major subject.

Another college study reports(87) a great number of extraneous and and almost ridiculously superficial sources of interest. Operations they had undergone had aroused the interest of several in becoming doctors. That his home was opposite a law school drew one senior into the legal profession. Another college student was attracted to journalism because reporters had passes to baseball games. "Such are chance illustrations but suggest the wide diversity of influences constantly playing on young people; and when circumstances are ripe, any of these, rather than a carefully made analysis of self and vocation, serves as the impetus."

The same author believes that one factor in choice which would yield enlightening results if studied scientifically is the personality of the instructor. The investigator was impressed by the amount of interest evident in some professor's courses and the positive distaste for subjects

taught by other professors. Over one-third of the college students altered their major subject during their college career. The poser is, how many did so due to the influence of their professors?

At the University of Minnesota(88)there was found an association between vocational choices and liking for teachers. However, the data therein is inconclusive in that it may mean that students tend to react positivey to those professors who teach subjects which are of greatest interest to them.

Hurlock and Jansing(89) report a study by Busemann conducted in Germany. Busemann concluded that the size of the family influenced the choice of vocation. Of those choosing the higher ranking professions, the majority came from families with more than 2 children. The presence of brothers and sisters, thought the investigator, appeared to act as an incentive to ambition.

To return once more to the study made at the University of Minnesota(90) it was found, in a group of 136 men, that only one student of the 56 expressing interest in engineering came from families with an income of above 45,000 annually. Of the eighty other students who expressed no such interest, 20% came from homes with incomes above that figure. Of those expressing interest in business 25% came from families with this income, while only 8% of those who indicated no such interest came from such families.

The same study reveals that vocational interests are not influenced by the mother's occupation either before or after marriage. Most women enter

occupations not because of particular abilities or personality structures, but only to do something to earn a living before marriage, or to augment family income after marriage. Thus, as the occupation of the mother is of little importance to her or the family, it is not surprising that it has little relationship to the vocational choice of her children.

Probing into the occupations of acquaintances admired most by the students and of persons (whether or not they knew them personally) whom they admired most, the above study emerged with some interesting results. The occupations of the most admired acquaintances, it was learned, had little relation with the student's vocational choice, and in general, there was little to suggest that they tended to identify themselves vocationally with people they actually knew. But there was a tendency to admire most people with whom they were not acquainted and who were in the fields related to their vocational choices.

In an informative discussion of unrealistic ambitions, Korner(91) takes the position that the ambitions originate chiefly out of the influence of teachers, influence of family, and inherent factors in the persons themselves.

Concerning the unrealistic aims of parents the author points out a variety of sources; often parents employ as yardsticks for their children high standards by which they themselves abide or to which they aspire, regardless of their children's intellectual capacities or emotional equipment. Having had college educations themselves, they may readily assume that their children will tread in their collegiate footsteps. Again, through a process

of identification, parents compensate through their children for the deprivation which they themselves experienced in the way of education as well as in social and economic position. In other cases, the author points out, the father's occupation plays the decisive role (positively or negatively) in determining the vocational ambition of the child. The father may either wish his child to enter field other than his own when disillusioned, or may wish his son to take over his business or profession.

The third main source of unrealistic ambitions are inherent factors in the persons themselves. Sometimes an internalized parental ambition drives them to achieve beyond their capacities. Often there is competitiveness to outrival a sibling, or a desire to conform to the achievement of family members. Again, lack of satisfaction of other needs leads to a frantic seeking for fulfilment in the vocational area, regardless of reality factors. Thus, vocational ambition becomes a substitute for more basic satisfactions. On occasion, individuals accept the vocational choices of friends with whom they closely identify themselves.

Korner points to additional unconscious factors which might influence vocational choices. An exhibitionistic individual may attempt to enter an occupation which satisfies his special need, and may thus aspire to positions as models, actors, etc. Occasionally, an individual with strong sadistic impulses expresses a desire to enter surgery or related fields. Obsessional individuals frequently seek outlets in occupations involving highly detailed and systematized work. And some vicariously attempt to satisfy needs for dependency by working with children and by yielding what was denied them in

their own childhood.

Jobs & Realism:

Unanimous are studies of choices of high school students in attesting the popularity of so-called white collar or professional occupations to the exclusion of the ones into which an overwhelmingly large percentage of high school students eventually enter.(22,28,70,74,76,7,5,61,3,35,26,53,55). These studies were made in many different states and localities, yet coalesce in reporting the domination of professional choices and the relative sparsity of choice for other occupations.

Apparently not only in high school, but in every grade and at every grade and at every school period, too many chose the professions, and too few the remainder. From the standpoint of this reality measure, the choices of boys in the third grade are frequently as reliable as those in any other grade.

As a sample of a high school study, the following are the results obtained by Bedford(92)upon examination of twelve rural high schools distributed throughout California:

	% of boys who chose 1928	% of boys who chose 1934	Occupations of fathers by %
Agriculture	12	22	43
Trade	10	4	13
Public Service	2	4	2
Professions	36	35	5
Clerical	5	17	5

The author notes that the percentage of those who chose the professions was seven times as great as the percentage of fathers engaged in professional work. Also in only one-ninth of the cases did the son choose the same occupation as that of his father.

To cite further evidence of the disproportion between vocational choices and vocational opportunities, 16.2% had chosen a profession in which there were at the time 5,000 unemployed in California; and this in 1928. It is also noteworthy to point out here that the ratio of supply to demand ranges from .06 to 1 in mining to 8.37 to 1 in the professions.

For this state of affairs, Bedford finds culpable "a false sense of values, characteristic of American life today". Finding fault with the secondary schools and their traditional college preparation background and their emphasis on the so-called cultural and disciplinary subjects, he believes they excercise a subtle and powerful effect upon the ambitions of young people which tends to sway them in an unrealistic manner. He reveals that only 59% of his subjects professed knowledge of the training required for the occupations they had selected.

The results are the same everywhere. A survey of close to 5,000 Indianapolis high school students(93) revealed that 70% of the boys expect to engage in work in which 35% of the Indianapolis residents engage. Only 1% wanted employment in labour occupations represented by 30% of the Indianapolis population and by 11% of their own fathers. While, of course, most unskilled places will be filled by people not attending high school, still these students won't come even close to replacing their fathers if they are

able to execute their wishes.

Lehman and Witty(94) calculated the coefficients of correlation between the number of employed workers and the number of high school aspirants in 24 occupations, the results were all negative correlations.

A more ambitious study of vocational interests among high school students covered a period of four years(95). Of those who entered a vocation, only 40% engaged in an occupation of a rank equal or higher by comparison to the one indicated as the original choice.

Manifestly, the attitudes of students have been assimilated from the surrounding environment, which bristles with expectations of beginning at the bottom and working up. As one writer remarks Strong (96), there is much in the individual's school experience to encourage aspirations to high levels. The types of work most talked about, best known to teachers, and prepared for by the more capable and respected students are the professions. Students usually start out by wanting to climb high, but they are compelled eventually, to compromise with a lower level.

College students are little more realistic in the distribution of their vocational choice than their juniors. Studies at the University of Minnesota(97) led to the opinion that: "Choices of a vocation are generally made by students for adventitious reasons and incidental motives, in partial or almost total ignorance of the activities, requirements, possibilities, and limitations of the vocations that they choose."

Invariably, the public is just short of amazed to find college men

in jobs that are below the professions in desirability. A college man holding down the position of a rickshaw-puller or a cooley is front page material. The notion that a college degree is the pass-key to a professional or executive position is a prevalent view fostered by the non-college population. The upshot is a top-heavy concentration of undergraduates looking forward to positions of the highest socio-economic prestige. That these professions are highly competitive and open to only a few rarely succeeds in making more than a fleeting impression on the hopeful aspirants.

Sisson(98), at Wesleyan, found that among 270 entering freshmen, 54% chose either medicine, law, or teaching; the loading of choices in the professions, as a whole, was 83% of all the students. Realizing that a comparison of the vocational choices of Wesleyan students with the occupation distribution of the population would be unsound (since these students presumably are above the average in intelligence and ability), Sisson compared them with a population of the same average ability, namely, former students of the same university. Note the wide divergences in these results:

	% of Undergraduates who plan to enter	% of Graduate who have actually entered
Medicine	17	2
Law	14	7
Professions	83	47
Business	11	34

In another study at Lousiana State University, Sisson(99) found that while 41% of the male students entered college with the idea of becoming

engineers, only one of ten would eventually graduate in this field.

Sparling(100) reports that 70% of the students anticipated entering the three most crowded occupations in the United States, and over 95% chose the four most crowded occupations in the Metropolitan area at that time. Only 34% chose vocations in which their general intelligence was above that of the average person engaged in it. A conservative estimate was that 50% of those interested in the professions did not have sufficiently high grades for admittance to professional schools; Over 93% belonged to minority groups subject to discrimination by professional schools. And 75% of the prospective teachers had grades below 80 in the subjects they wanted to teach.

In the vocations they have selected, the students expect to earn four times as much as men now engaged in these occupations. Preponderantly there was a record of little attempt to occupational tryouts as well as inadequate utilization of social and recreational resources for vocational exploration. The great majority of men fell short of having plausible or comprehensive plans for entry into their chosen vocations.

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CHAPTER III

METHOD AND PLAN

This study has been undertaken to determine the relationship between factors such as educational preparation, family background, indentifications and other pressures both external and internal and the choice of an occupation. An individual faced with the problem of choosing his life work has to make a decision in favour of one particular occupation against many which present themselves before him.

In discriminating against many occupations and choosing only one he is influenced by (1) the situation he is placedd in at that particular moment, (2) by his previous preparation both in the form of his education and his cultural background, and his own conscious or unconscious psychological conditioning and the values he has imbibed.

The last factor is highly important as it is what may be called the internalization, with the help of assimilatory process of even the external factors. Then there may be certain factors such as identification with certain persons (whom we may call the key persons) which determine his decision in favour of one particular occupation. This study has been undertaken with a view to determine the influence of these factors in the choice of occupations as reflected in the professions of Teaching, Law, Medicine and Engineering.

In order to arrive at valid and reliable results, it is important to determine a proper way of approach to the problem. A question of way of approach leads up to a consideration of methodological problem and a determination of the instrument of investigation. Modern scientific methodology has developed various techniques to study and explore the field of social sciences. Here, the social scientist comes across the most formidable stumbling block in his way, because of the 'natural-science-bias' of the modern methodology of social sciences. The experimental approach, in many cases, being a blind imitation of the methods of natural scientists, has resulted in a superficial treatment of most of the social phenomena. However, basic and fundamental these criticisms may be, it is not possible to expound and elaborate them here.

Once a research problem has been thrashed out, it needs to obtain and analyze objective information. To obtain such data several methods of study are available. Which of the methods will be chosen by an investigator depends on the amenability of a particular method to his research programm. For the purposes of a study like the present one two methods are usually employed viz. (1) the interview and (2) the questionnaire.

The former, i.e., the interview is a long and time consuming process. Moreover, when data is to be collected from amongst a sample widely scattered, interviewing them all involves a heavy expenditure, which is obviously, beyond the resources of any individual investigator. Selection of a method is always dependent on the human, economic and temporal resources of the individual investigator and these conditions made it necessary, apart from other factors, for the present investigator,

to select questionnaire as instrument of research.

Rationale for the Use of Questionnaire In This Study:

A questionnaire is a form constructed and distributed in a selected population in order to get responses to certain questions. Generally it is a fact finding instrument intended to obtain information about certain social-psychological phenomena. The required information may be directly given by the respondents or indirectly inferred from their responses according to the pre-planned design of the investigator.

Its use has become wide spread among the social scientists, Good and Scates (1) have pointed out that 'The questionnaire is a major instrument of data-gathering in descriptive-survey studies, and is used to secure information from varied and widely scattered sources. It is probably out-ranked in frequency of use only by the survey test... The questionnaire is particularly useful when one cannot readily see personally all of the people from whom he desires responses or where there is no particular reason to see the respondent personally. This technique may be used to gather data from any range of territory, sometimes international or national'.

The questionnaire is, perhaps, the most important technique for gathering data on a large scale, provided it has been constructed with imagination and rigour. Construction of a questionnaire, on the part of an investigator, requires an adequate understanding of and an insight into his problem of research. It is incumbent on him to have a vast perspective and background of the literature in the proper field of his inquiry and

in the relevant fields of related disciplines.

The technique of questionnaire construction is time-consuming and cumbersome. It requires proper formulation and evaluation of questions. The present investigator had to formulate and reformulate his questionnaire some six times in order to make it a refined instrument. Three of the forms have been appended with this report in the shape of Appendix A,B and C. To avoid unnecessary bulk the first three formulations have not been appended here. Good and Scates (2) say that 'It is essential that the criticisms of qualified persons be secured before the final form of the questionnaire is prepared and mailed out.'(p.828) At least twice the forms of the questionnaire were discussed in the meetings of the Department of Philosophy and Psychology, Aligarh Muslim University,Aligarh, specially convened for this purpose. The investigator discussed the forms item by item with the supervisor many times, and occasionally with other members of the staff, before finalizing it. The fifth form, i.e., Appendix 'B' was sent to Professor Eli Ginzberg of Columbia University, the senior author of the book 'Occupational Choice',(3) to elicit his opinion, criticism and suggestions for the final form. He was kind enough to send his opinion and suggestions which were incorporated in the final form. For the questionnaire given in Appendix 'B', Professor Ginzberg in reply to the present investigators letter, says, " I have now had a chance to read your letter with care and to review the questionnaire. I would like to begin this letter of mine by telling you how very impressed I am by the initiative and insight which you have shown, not only in selecting this particular subject for inquiry but in constructing so comprehensive a questionnaire..... I am firmly of the belief that the employment of a questionnaire such as you have developed will push knowledge ahead very much more than if one did not try to use this method and just

speculated upon the problem in the abstract".

The present investigator did not rest content with gaining the opinion and consent of qualified men and experts, but actually tried the questionnaire on a small population before finalizing it. Having analysed those returns the questionnaire was further modified. The final version of the Questionnaire is appended with this report as Appendix 'C'. To minimize the effects of communal feelings, if any, on the part of respondents and to get as good a rapport as possible. The names of a colleague and/a postgraduate student were associated with the Questionnaires as given in Appendix 'B' and 'C' respectively.

Statistical Techniques:

Statistical techniques used in a study are determined by the nature of the problem and its amenability to a particular statistical formula. In other words, a statistical technique can be applied to data only when the method of data collection and the population sample conform to certain assumptions regarding the applicability of a particular test or formula. Parametric tests of analysis, for example assume a normal distribution of the sample population. As this assumption could not be fulfilled in the case of the data obtained from different groups of this study (i.e., data obtained from Doctors, Engineers, Lawyers and Teachers as independent samples), we had to apply non-parametric or distribution-free tests which do not impose such restrictions regarding distribution.

Justification for using non-parametric tests is provided by Siegel (4) when he says, "... behavioral scientists rarely achieve the sort of measurement which permits the meaningful use of parametric tests, non-parametric statistical tests deserve an increasingly prominent role in research in the behavioral sciences"

As the aim of this study was to ascertain significant differences regarding the influence of certain factors within each group, between the groups and also in the combined group of all the professions as a whole, it was decided to employ several suitable statistical tests. The purpose of using more than one test was two fold: (1) to provide independent evidence for possible relationships, and (2) to provide checks against the findings of different statistics. Keeping this in view the non-parametric statistical tests of chi-square and Binomial, and Critical Ratio were employed. It may, however, be pointed out that the analyses of the data obtained are mainly based on the one and two sample chi-square tests.

In the first instance the chi-square one sample test was employed for the purposes of item wise comparisons within each group viz., Doctors, Engineers, Lawyers and Teachers separately. The same test was used in the case of the combined professional group as a whole, i.e, Doctors, Engineers, Lawyers and Teachers lumped together as one group. Whereas, in the case of inter-group comparisons, i.e., Doctor-Engineer, Doctor-Lawyer and Doctor-Teacher etc., on each item the two sample chi-square test was used.

In order to apply the one sample chi-square test the observed frequencies in the two cells were tabulated. On the basis of 50-50 split

the expected frequencies were worked out and the chi-square value was obtained. The formula used was:

$$X^2 = 2 \left(\frac{o - e}{e} \right)^2 \qquad \text{(Edwards 5)}$$

While applying the two sample chi-square test the observed frequencies in the 2 x 2 table were plotted. The frequencies of the columns and rows were added together and the expected frequencies were calculated. The discrepencies between the observed and the expected frequencies were calculated. The discrepencies between the observed and the expected frequencies were squared and each one of these was, then, divided by its respective expected frequency. The two values thus obtained were added together to arrive at the chi-square value. The formula used was:

$$X^2 = \Sigma \frac{(fo - fe)^2}{fe} \qquad \text{(Guilford, 6)}$$

Another statistic used to check the findings of chi-square and to provide an added independent evidence was the two-tail Binomial test. When the data in a one sample-type design happens to be in two discrete categories another suitable non-parametric technique is the Binomial test. An added advantage enjoyed by the binomial test is its applicability on both the small and the larger samples. In the case of our analysis of independent groups separately one of the groups viz., that of Doctors fell below the minimum required for a large sample. The investigator, therefore, employed the small sample Binomial test to analyse the responses of this group.

The formula used was

$$\sum_{i=0}^{x} \left(N_i \right) PiQN - 1 \qquad \text{(Siegel 7)}$$

The other three groups viz., those of Engineers, Lawyers, and Teachers fell above the minimum required for a large sample, therefore, the large-sample Binomial test was employed for analysing the data of these groups. For the purposes of the analysis of the data of the combined group of professions also (i.e., the combined group of Doctors, Engineers, Lawyers and Teachers as a whole) the same technique, viz., the large sample Binomial test was employed. The formula used was:

$$z = \frac{(x \pm .5) - NP}{\sqrt{NPQ}} \qquad \text{(Siegel 8)}$$

To apply the Binomial test for small sample (Doctors data) the smaller frequency (x) in the two categories was found out and the desired level of significance decided upon. Having worked out these two steps the table of probabilities (Table 'D', Siegel, 9), associated with values as small as observed values of x in the Binomial test was consulted This table provides the one-tailed probability of occurrence under H_o of smaller frequency (x) for a given N. If the probability was found to be less than the predermined level of significance the H_o was rejected, whereas it was accepted when the probability was greater than the predetermined level of significance. The p yielded by table 'D' appended in Siegel(10) was doubled as we were applying a two tailed test.

The use of the large-sample Binomial tests required the tabulation of the observed frequencies in each of the two categories. The correction for continuity consisting of * .5 to the smaller observed frequencies was incorporated. In other words .5 was added to the value of x when x < NP and subtracted from the value of x when x > NP. This correction was necessary because normal distribution is for a continuous variable whereas the Binomial distribution involves a discrete series.(Siegel (11) The significance of the obtained value of % was determined by referring to the Table 'A' appended in Siegel's (12) Non-Parametric Statistics.

In the case of inter-group comparison a one sample test like the Binomial could not be applied.

In the third place 'Yes', 'No', or 'Agreement', 'Disagreement' frequencies on each item were calculated and percentages worked out. In order to place higher reliance on percentages and render them comparable with the results of chi-square and Binomial test, a test of proportion, i.e., t Ratio or Critical Ratio (CR) was applied.

This statistic was chosen with deliberation and purpose as "A t test and a chi-square test of the same statistics will ... lead to the same inference when there is 1 degree of freedom ". (Guilford,13) This relationship as expressed by Quinn Mcnemar is in the form of the formula:

$$X^2 = \left(\frac{x}{\sigma}\right)^2 = (CR)^2 \qquad \text{(Quinn Mcnemar, 14)}$$

while Guilford expresses it in the formula:

$$X^2 = t^2 \quad \text{or} \quad t = \sqrt{X^2} \qquad \text{(Guilford, 15)}$$

This statistical technique was used to analyse the data of each group viz., Doctors, Engineers, Lawyers and Teachers separately. It may be pointed out here that this test was not made use of for analysing the data of the combined professional group as a whole, because the results arrived at by employing the chi-square test were in support of the results obtained by using the Binomial test. In the case of Inter-group comparisons only chi square test has been employed.

In order to work out the critical ratio or t- ratio it was necessary to compute the standard error of proportion and the standard error of difference of proportion. The formulae for calculating SEP and SEDp respectively were:

$$\sigma p = \sqrt{\frac{pq}{N}} \qquad \text{(Guilford, 16)}$$

$$\sigma DM = \sqrt{\sigma^2 M_1 + \sigma^2 M_2} = \sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}$$

(Quinn Mcnemar , 17)

The critical ratio was calculated by applying the formula:

$$x/\sigma \text{ (or CR)} = \frac{MD}{\sigma MD} \qquad \frac{DM}{\sigma DM} \quad \text{(Quinn Mcnemar, 18)}$$

Pilot Study:

Having finalized the fifth form of the questionnaire as given in Appendix 'B' the present investigator distributed it to a small selected sample for a preliminary try-out. Forty subjects chosen randomly from the lists of teachers, lawyers, engineers and doctors working at Aligarh were selected for this purpose. The returns were carefully analysed. And on the basis of this analysis questions No. 14, 24, 32 and 33 of Appendix 'B' were dropped from the final questionnaire given in Appendix 'C'. Question 39 (Appendix 'B') was naturally deleted from the final questionnaire as it had already served its purpose.

The pilot study mainly served the purpose of refining the questionnaire and resulted in giving some insight and developing a perspective regarding the research problem. The difficulties of collecting returns were for the first time realized during the collection of returns for the pilot study and an improved plan was worked out for the main study in this regard.

Sample:

It may be pointed out that the term 'educated' in the title of this study is a very broad term. The present investigator, however, tried to delimit it within the learned professions. For this purpose twenty five university teachers were selected as judges and they were asked to list five most important learned professions in order of preferan Four of the most frequent learned professions were thus selected for the

purpose of this study, which turned out to be Doctors, Engineers, Lawyers and teachers.

A minimum of ten years experience in the profession was regarded as one of the criteria for inclusion in the list. Another criterion coupled with ten years minimum experience was the qualifications of the sample population. The following chart explains the criteria of selection in the list:

Doctors	Registered Medical Practitioners with ten years experience.
Engineers	Degree or Diploma holders in Engineering with ten years experience.
Lawyers	LL.B. with ten years experience
Teachers	M.A. or M.Sc.with ten years experience.

The following is the break-up of the sample population who fulfilled the criteria laid down for selection:

	Available	Selected	Questionnaire returns
Doctors	70	35	25
Engineers	110	55	40
Lawyers	156	78	57
Teachers	214	107	78
	550	275	200

Employing the random sampling technique half of the available population was elected for the sample of this study. The whole sample

population consisted of male professional workers in the four fields.

The sample of the present study consists of two hundred and seventy five subjects working in the Districts of Aligarh and Agra. The random sampling technique was employed to draw out the sample. Lists of the bar association, teachers' associations and district medical council and lists of engineers working in municipalities, P.W.D. and Irrigation department were collected from these Districts. Each name in the lists was alloted a number and put into a box. Lots were then drawn from this box and two hundred and seventy five subjects, were thus randomly selected. They were requested to fill up the questionnaire and return to the investigator. The returns totalled to 200.

In a way the randomizing technique was determined by facilities available to contact the sample population personally. As some of the students of the investigator were from these districts and they could easily contact a large number of the sample population, therefore, these areas were given preference over any other area. It was assumed that by and large the sample population shall be representative.

Another important consideration in this regard was that of proportional representation. The number of cases selected from each group was in proportion to its population, hence the group of Doctors consi of a very small number whereas the teacher group is quite large.

Whatever be the sampling technique and however meticulously it may have been carried out in a piece of research, one often feels diffident and rather skeptical regarding sampling methodology in the field of social sciences as will be borne out by the following quotation:

" .., some specialists with considerable statistical sophistication in education, psychology, and other social fields do not completely accept the purely statistical point of view in trusting a random sample, as do mathematical statisticians, who simply say the probability is such and such that the results will vary only a certain amount. It must be remembered that this statement contains the word probability... Even by the most perfect of sampling procedures, the research worker cannot be certain that he actually has any better representative sample than when he takes an intact group(such as a particular class of pupils in a given school) with all of its unknown selective factors; that is, the amount of selection which enters into a given sample by the best of procedures is still unknown... While the use of approved procedures in sampling may give the investigator a feeling of confidence in a single sample, this is purely a psychological matter rather than an actuality'. (Good and Scates 19).

But since the difficulties are inherent in the very nature of the sampling technique and one has no better techniques available to him - so one cannot help using it for what it is worth.

Returns:

As a result of sad experience regarding returns during the pilot study, personal contacts were made with respondents. Repeated calls and re-supplying of questionnaire whenever reported lost, improved the

returns percentage beyond all hopes. This procedure, although, was time consuming and took almost a year to collect all the questionnaires but the investigator had the satisfaction of having about 75 per cent returns, totaling to 200 cases which form the population studied in this investigation.

Hypotheses:

It may, in this connection, be mentioned that every item in the questionnaire formulates and represents a hypothesis. While applying the statistical test a H_o was formulated on the basis of each item of the questionnaire taken up for analysis and the significance worked out in the case of chi-square, and on the basis of the result of the Binomial test each H_o was accepted or rejected as given in the various tables in chapter IV. Critical Ratio was also worked out on the basis of each item taken up for analysis and its results have also been given in the appropriat tables in chapters IV and V.

Plan of Interpretation:

Even the final questionnaire (Appendix 'C') contained thirty-four questions or items. Analysis of all of these items became rather unwiedly and some of the items were dropped out. It may be pointed out in this connection that it is usual that many questions are included in a questionnaire. But it is neither possible nor necessary to take up all the questions for analysis. Some of the questions were dropped out when it was found that no meaningful analysis or result can be derived from those questions. Some other questions were answered in such widely different manners by the

respondents that it was not possible to link together in any reasonable manner the responses of the sample and, therefore, these too, were not taken up for analysis. The number of questions finally taken up for analysis is 16. Another question meant for preliminary information regard father's occupation, which is numbered 'A' has also been selected for analysis. Many of these questions comprise of several items. For instance question No. 4 contains 23 items which have been grouped according to the areas to which they belong. For this question seven groupings have been effected viz., def (social and humanitarian considerations), Jnc (considerations for power and authority), Kq (affluence and monetary considerations), Clmv (considerations regarding one's own suitability, abilities, interests and experiences), ab (identifications with other people), ghit (reasons growing out of pressures of other people), rsu (pressures exerted by the environment, e.g., family circumstances etc.).

As regards other questions they have also been grouped whenever required for purposes of giving a better and more coherent picture of the analysis of data. For example, at places questions giving information from early childhood have been analysed together. Another grouping of questions that was considered advisable related to the role of key persons within the family, and the school or college. In short, whenever it was found feasible, the questions showing reasonable affinities or coming under common categories were treated together. It may also be pointed out, here, that almost all the studies, which have been referred to in a

in a previous chapter, have at the most been satisfied with working out the percentages by way of quantification. The present study is the first of its kind to make use of statistical sophistications like the chi square, the CR and the Binomial test.

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CHAPTER - IV

STATISTICAL ANALYSIS

This chapter presents the treatment and results of the statistical analysis of data obtained in the present study. The statistical techniques employed are the chi square, the Binomial test and the critical ratio (described in Chapter III). All the three techniques have been employed to analyse the data obtained for each independent group of the sample, while the data obtained from the combined professional group as a whole have been analysed by means of the one sample chi square test and the large sample Binomial test. In the case of inter-group comparisons the two sample chi square test has been employed.

The analysis of the independent groups' data viz. Doctors, Engineers, Lawyers and Teachers, done by the chi square one sample test is given in Tables 1 to 4, and that of the combined professional group as a whole in Table 5. Tables 1 to 5 give only the item numbers and chi square values. The treatment and various steps with which the chi square in the case of the combined Professional group was arrived at is given in Appendix D. Presentation of all the tables in this chapter would have been inordinately lengthy, therefore, in place of some of the detailed tables (given in appendix D) only concise tables are presented here. Tables 144 to 147 summarise the results obtained by applying the Binomial test on the independent groups. The analysis, of the data obtained from the combined professional group as a whole done by applying the Binomial test is given

in table 148. Whereas, tables 149 to 152 give the results of the analysis of data done by applying the t-test (Critical Ratio or CR) in the case of independent groups.

Significance of differences at 1% and 5% levels of probability are denoted by putting two and one asterisks respectively on such values. Wherever expected frequencies in the chi square tables were less than 10 Yate's Correction was applied.

Tables 6 to 143 give the treatment and results arrived at by applying the two sample chi square test on the data obtained and analysed for purposes of inter-group comparisons viz. Doctor-Engineer, Doctor-Lawyer, Doctor-Teacher, Engineer-Lawyer, Engineer-Teacher and Lawyer-Teacher groups. The abbreviation 'D', 'E', 'L' and 'T' used in these tables refer to 'Doctors','Engineers', 'Lawyers' and 'Teachers' respectively.

Table - I:

Showing the obtained chi square values at 1 df from the Doctors' Data

Item	chi square value	Item	chi square value
'A'	14.440**	16	9.000**
3	6.760**	17	6.760**
4DEF	1.000	18	4.840*
4JNO	0.360	19	6.760**
4CLmv	1.960	20	0.040
4Ab	0.040		
4GHIT	1.000	22	4.840*
4RSU	9.000**		
4 KQ	1.000	25	4.840*
5	9.000**	26	9.000**
10	1.960	32	1.960
12	0.360		
13	1.960		
14	3.240		

Table - II

Showing the obtained chi square values at 1 df from the Engineers' Data

Item	chi square value	Item	chi square value
'A'	19.600**	16	14.400**
3	0.400	17	2.500
4DEF	0.100	18	19.600**
4JNO	0.400	19	14.400**
4QMLV	0.900	20	14.400**
4AB	6.400*		
4GHIT	3.600	22	0.900
4RSU	25.600**		
4KQ	0.400	25	19.600**
5	19.600**	26	25.600**
10	0.400	32	4.900*
12	1.600		
13	0.400		
14	0.900		

Table - III

Showing the obtained chi square value at 1 df from the Lawyers' Data

Item	chi square value	Item	chi square value
'A'	29.490**	14	26.684**
3	0.156	16	0.156
4DEF	3.946*	17	26.684**
4JNO	2.964	18	35.526**
4CLMV	0.156	19	21.490**
4AB	5.070*	20	26.684**
4GHIT	7.736**	22	2.122
4RSU	0.156	25	19.104**
4KQ	0.156	26	24.016**
5	6.332*	32	2.122
10	5.070*		
12	0.858		
13	0.016		

Table - IV

Showing the obtained chi square values at 1 df from the Teachers' Data

Item	chi square value	Item	chi square value
'A'	40.250**	13	1.846
3	22.614**	14	43.128**
4DEF	16.614**	16	22.614**
4JNO	13.128**	17	27.128**
4CLMV	20.512**	18	34.666**
4AB	1.282	19	0.460
4GHIT	10.050**	20	29.534**
4RSU	2.512	22	40.204**
4KQ	22.614**	25	40.204**
5	34.666**	26	46.152**
10	11.538**	32	0.050
12	2.512		

Table - V

Showing the obtained chi square value at 1 df from the Combined Professional Groups data as a whole

Item	chi square value	Item	chi square value
'A'	103.680**	13	0.320
3	2.420	14	33.620**
4DEF	3.920*	16	35.280**
4JNO	3.920*	17	58.320**
4CIMV	15.680**	18	92.480**
4AB	8.820**	19	30.420**
4GHIT	21.780**	20	62.720**
4RSU	20.480**	22	35.280**
4KQ	14.580**	25	81.920**
5	64.980**	26	103.680**
10	6.480*	32	5.780*
12	1.620		

TABLES SHOWING OBTAINED CHI SQUARE VALUE AT 1 df FOR INTER GROUP COMPARISONS

Table - 6

Influence of father's occupation:

DOCTOR VERSUS ENGINEER:

Item 'A'	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Same profession	3	6	3.5	5.5	0.0	0.0	0.0	0.0	0.00	0.00
Different profession	22	34	21.5	34.5	0.00	0.0	0.0	0.0	0.00	0.00
	25	40							0.00	0.00

chi square = 0.00 - insignificant

Table - 7

DOCTOR VS LAWYER

'A'	D	L	D	L	D	L	D	L	D	L
SP	3	8	3.4	7.6	.1	-.1	.01	.01	.002	.001
DP	22	49	21.6	49.4	-.1	.1	.01	.01	.0004	.0002
	25	57							.0024	.0012

chi square = 0.0036 - insignificant

Table - 8

DOCTOR VS TEACHER

'A'	D	T	D	T	D	T	D	T	D	T
SP	3	11	3.4	10.6	.1	-.1	.01	.01	.002	.0009
DP	22	67	21.6	67.4	-.1	.1	.01	.01	.0004	.0001
	25	78							.0024	.0010

chi square = 0.0034 - insignificant

Table - 9

ENGINEER VS LAWYER

'A'	E	L	E	L	E	L	E	L	E	L
SP	6	8	5.8	8.2	-.3	.3	.09	.09	.015	.010
DP	34	49	34.2	48.8	.3	-.3	.09	.09	.002	.001
	40	57							.017	.011

chi square = 0.028 - insignificant

Table - 10

ENGINEER VS TEACHER

'A'	E	T	E	T	E	T	E	T	E	T
SP	6	11	5.8	11.2	.3	-.3	.09	.09	.015	.008
DP	34	67	34.2	66.8	-.3	.3	.09	.09	.002	.001
	40	78							.017	.009

chi square = 0.026 - insignificant

Table - 11

LAWYER VS TEACHER

'A'	L	T	L	T	L	T	L	T	L	T
SP	8	11	8.1	10.9	.4	-.4	.16	.16	.019	.014
DP	49	67	48.9	67.1	-.4	.4	.16	.16	.003	.002
	57	78							.022	.016

chi square = 0.038 - insignificant

Table - 12

Advice of parents & others:

DOCTOR VERSUS ENGINEER

Item 3	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Advised by parents	19	22	15.8	25.2	2.7	-2.7	7.29	7.29	.461	.289
Advised by others	6	18	9.2	14.8	-2.7	2.7	7.29	7.29	.792	.492
	25	40							1.253	.781

chi square = 2.034 - insignificant

Table - 13

DOCTOR VS LAWYER

3	D	L	D	L	D	L	D	L	D	L
AP	19	30	14.9	34.1	4.1	-4.1	16.81	16.81	1.128	.492
AO	6	27	10.1	22.9	-4.1	4.1	16.81	16.81	1.664	.734
	25	57							2.792	1.226

chi square = 4.018 - significant at 5% level

Table - 14

DOCTOR VS TEACHER

3	D	T	D	T	D	T	D	T	D	T
AP	19	18	9	28	9.5	-9.5	90.25	90.25	10.027	3.223
AO	6	60	16	50	-9.5	9.5	90.25	90.25	5.640	1.802
	25	78							15.667	5.025

chi square = 20.692 - significant at 1% level

Table - 15

ENGINEER VS LAWYER

3	E	L	E	L	E	L	E	L	E	L
AP	22	30	21.4	30.6	.6	-.6	.36	.36	.016	.011
AO	18	27	18.6	26.4	-.6	.6	.36	.36	.019	.013
	40	57							.035	.024

chi square = 0.059 - insignificant

Table - 16

ENGINEER VS TEACHER

3	E	T	E	T	E	T	E	T	E	T
AP	22	18	13.6	26.4	8.4	-8.4	70.56	70.56	5.188	2.672
AO	18	60	26.4	51.6	-8.4	8.4	70.56	70.56	2.672	1.367
	40	78							7.860	4.039

chi square = 11.899 - significant at 1% level

Table - 17

LAWYER VS TEACHER

3	L	T	L	T	L	T	L	T	L	T
AP	30	18	20.3	27.7	9.7	-9.7	94.09	94.09	4.634	3.396
AO	27	60	36.7	50.3	-9.7	9.7	94.09	94.09	2.563	1.870
	57	78							7.197	5.266

chi square = 12.463 - significant at 1% level

Table - 18

Social & Humanitarian consideration:

DOCTOR VERSUS ENGINEER

Item 4 DEF	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Social consi-deration	15	21	13.8	22.2	1.2	-1.2	1.44	1.44	.104	.064
No Social consi-deration	10	19	11.2	17.8	-1.2	1.2	1.44	1.44	.128	.080
	25	40							.232	.144

chi square = 0.376 - insignificant

Table - 19

DOCTOR VS LAWYER

4 DEF	D	L	D	L	D	L	D	L	D	L
SC	15	21	11	25	4	-4	16	16	1.454	.640
NSC	10	36	14	32	-4	4	16	16	1.142	.500
	25	57							2.596	1.140

chi square = 3.736 - insignificant

Table - 20

DOCTOR VS TEACHER

4 DEF	D	T	D	T	D	T	D	T	D	T
SC	15	57	17.5	54.5	-2	2	4	4	.228	.073
NSC	10	21	7.5	23.5	2	-2	4	4	.533	.170
	25	78							.761	.243

chi square = 1.004 - insignificant

Table - 21

ENGINEER VS LAWYER

4DEF	E	L	E	L	E	L	E	L	E	L
SC	21	21	17.3	24.7	3.7	-3.7	13.69	13.69	.791	.554
NSC	19	36	22.7	32.3	-3.7	3.7	13.69	13.69	.603	.423
	40	57							1.394	.977

chi square = 2.371 - insignificant

Table - 22

ENGINEER VS TEACHER

4DEF	E	T	E	T	E	T	E	T	E	T
SC	21	57	26.4	51.6	-5.4	5.4	29.16	29.16	1.104	.565
NSC	19	21	13.6	26.4	5.4	-5.4	29.16	29.16	2.144	1.104
	40	78							3.248	1.669

chi square = 4.917 - significant at 5% level

Table - 23

LAWYER VS TEACHER

4DEF	L	T	L	T	L	T	L	T	L	T
SC	21	57	32.9	45.1	-11.9	11.9	141.61	141.61	4.304	3.139
NSC	36	21	24.1	32.9	11.9	-11.9	141.61	141.61	5.875	4.304
	57	78							70.179	7.443

significant

chi square = 17.622 at 1% level

Table - 24

Consideration for power and authority;

DOCTOR VERSUS ENGINEER

Item 4 JNO	fo		fe		(fo-fe)		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Power and Authority	14	22	13.8	22.2	.2	-.2	.04	.04	.002	.001
No Power & Authority	11	18	11.2	17.8	-.2	.2	.04	.04	.003	.002
	25	40							.005	.003

chi square = 0.008 - insignificant

Table - 25

DOCTOR VS LAWYER

4 JNO	D	L	D	L	D	L	D	L	D	L
PA	14	22	11	25	3	-3	9	9	.818	.360
NPA	11	35	14	32	-3	3	9	9	.642	.281
	25	57							1.460	.641

chi square = 2.101 - insignificant

Table-26

DOCTOR VS TEACHER

4 JNO	D	T	D	T	D	T	D	T	D	T
PA	14	55	16.7	52.3	-2.2	2.2	4.84	4.84	.289	.092
NPA	11	23	8.3	25.7	2.2	-2.2	4.84	4.84	.583	.188
	25	78							.872	.280

chi square = 1.152 - insignificant

Table - 27

ENGINEER VS LAWYER

4 JNO	E	L	E	L	E	L	E	L	E	L
PA	22	22	18.1	25.9	3.9	-3.9	15.21	15.21	.840	.587
NPA	18	35	21.9	31.1	-3.9	3.9	15.21	15.21	.694	.489
	40	57							1.534	1.076

chi square = 2.610 - insignificant

Table - 28

ENGINEER VS TEACHER

4 JNO	E	T	E	T	E	T	E	T	E	T
PA	22	55	26.1	50.9	-4.1	4.1	16.81	16.81	.644	.330
NPA	18	23	13.9	27.1	4.1	-4.1	16.81	16.81	1.209	.620
	40	78							1.853	.950

chi square = 2.803 - insignificant

Table - 29

LAWYER VS TEACHER

4 JNO	L	T	L	T	L	T	L	T	L	T
PA	22	55	32.5	44.5	-10.5	10.5	110.25	110.25	3.392	2.477
NPA	35	23	24.5	33.5	10.5	-10.5	110.25	110.25	4.500	3.291
	57	78							7.892	5.768

chi square = 13.660 - significant at 1% level

Table - 30

Consideration regarding one's own suitability

DOCTOR VERSUS ENGINEER

	Item 4 CIMV	fo		fe		fo-fe		$(fo-fe)^2$		$(fo-fe)^2$	
		D	E	D	E	D	E	D	E	D	E
	Consideration of Suitability	16	23	15	24	1	-1	1	1	.066	.041
No	Consideration of suitability	9	17	10	16	-1	1	1	1	.100	.062
		25	40							.166	.103

chi square = 0.269 - insignificant

Table - 31

DOCTOR VS LAWYER

4 CIMV	D	L	D	L	D	L	D	L	D	L
CS	16	30	14	32	2	-2	4	4	.285	.125
NCS	9	27	11	25	-2	2	4	4	.363	.162
	25	57							.648	.285

chi square = 0.933 - insignificant

Table - 32

DOCTOR VS TEACHER

4 CIMV	D	T	D	T	D	T	D	T	D	T
CS	16	59	18.2	56.8	-2.2	2.2	4.84	4.84	.265	.085
NCS	9	19	6.8	21.2	2.2	-2.2	4.84	4.84	.711	.228
	25	78							.976	.313

chi square = 1.289 - insignificant

Table - 33

ENGINEER VS LAWYER

4 CIMV	E	L	E	L	E	L	E	L	E	L
CS	23	30	21.9	31.1	1.1	-1.1	1.21	1.21	.055	.038
NCS	17	27	18.1	25.9	-1.1	1.1	1.21	1.21	.066	.046
	40	57							.121	.084

chi square = 0.205 - insignificant

Table - 34

ENGINEER VS TEACHER

4 CIMV	E	T	E	T	E	T	E	T	E	T
CS	23	59	27.8	54.2	-4.8	4.8	23.04	23.04	.828	.425
NCS	17	19	12.2	23.8	4.8	-4.8	23.04	23.04	1.888	.968
	40	78							2.716	1.393

chi square = 4.109 - significant at 5% level

Table - 35

LAWYER VS TEACHER

4CIMV	L	T	L	T	L	T	L	T	L	T
CS	30	59	37.6	51.4	-7.6	7.6	57.76	57.76	1.536	1.123
NCS	27	19	19.4	26.6	7.6	-7.6	57.76	57.76	2.977	2.171
	57	78							4.513	3.294

chi square = 7.807 - significant at 1% level

Table - 36

Identification with people

DOCTOR VERSUS ENGINEER

Item 4 AB	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Identification with people	13	12	9.6	15.4	3.4	-3.4	11.56	11.56	1.204	.750
No identification with people	12	28	15.4	24.6	-3.4	3.4	11.56	11.56	.750	.469
	25	40							1.954	1.219

chi square = 3.173 - insignificant

Table - 37

DOCTOR VS LAWYER

4 AB	D	L	D	L	D	L	D	L	D	L
IP	13	20	10.1	22.9	2.9	-2.9	8.41	8.41	.832	.367
NIP	12	37	14.9	34.1	-2.9	2.9	8.41	8.41	.564	.246
	25	57							1.396	.613

chi square = 2.009 - insignificant

Table - 38

DOCTOR VS TEACHER

4 AB	D	T	D	T	D	T	D	T	D	T
IP	13	34	11.4	35.6	1.6	-1.6	2.56	2.56	.224	.071
NIP	12	44	13.6	42.4	-1.6	1.6	2.56	2.56	.188	.060
	25	78							.412	.131

chi square = 0.543 - insignificant

Table - 39

ENGINEER VS LAWYER

4 AB	E	L	E	L	E	L	E	L	E	L
IP	12	20	13.2	18.8	-1.2	1.2	1.44	1.44	.109	.076
NIP	28	37	26.8	38.2	1.2	-1.2	1.44	1.44	.053	.037
	40	57							.162	.113

chi square = 0.275 - insignificant

Table - 40

ENGINEER VS TEACHER

4 AB	E	T	E	T	E	T	E	T	E	T
IP	12	34	15.6	30.4	-3.6	3.6	12.96	12.96	.830	.426
NIP	28	44	24.4	47.6	3.6	-3.6	12.96	12.96	.531	.272
	40	78							1.361	.698

chi square = 2.059 - insignificant

Table - 41

LAWYER VS TEACHER

4 AB	L	T	L	T	L	T	L	T	L	T
IP	20	34	22.8	31.2	-2.8	2.8	7.84	7.84	.343	.251
NIP	37	44	34.2	46.8	2.8	-2.8	7.84	7.84	.229	.167
	57	78							.572	.418

chi square = 0.990 - insignificant

Table - 42

Pressure of other persons

DOCTOR VERSUS ENGINEER

Item 4 GHIT	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Pressure of others	10	14	9.2	14.8	.3	-.3	.09	.09	.091	.006
No Pressure of others	15	26	15.8	25.2	-.3	.3	.09	.09	.005	.003
	25	40							.096	.009

chi square = 0. 105 - insignificant

Table - 43

DOCTOR VS LAWYER

4 GHIT	D	L	D	L	D	L	D	L	D	L
PO	10	18	8.5	19.5	1	-1	1	1	.117	.051
NPO	15	39	16.5	37.5	-1	1	1	1	.060	.026
	25	57							.177	.077

chi square = 0.254 - insignificant

Table - 44

DOCTOR VS TEACHER

4 GHIT	D	T	D	T	D	T	D	T	D	T
PO	10	25	8.5	26.5	1	-1	1	1	.117	.037
NPO	15	53	16.5	51.5	-1	1	1	1	.060	.019
	25	78							.177	.056

chi square = 0.233 - insignificant

Table - 45

ENGINEER VS LAWYER

4 GHIT	E	L	E	L	E	L	E	L	E	L
PO	14	18	13.2	18.8	.8	-.8	.64	.64	.048	.034
NPO	26	39	26.8	38.2	-.8	.8	.64	.64	.023	.016
	40	57							.071	.050

chi square = 0.121 - insignificant

Table - 46

ENGINEER VS TEACHER

4 GHIT	E	T	E	T	E	T	E	T	E	T
PO	14	25	16.1	22.9	-2.1	2.1	4.41	4.41	.273	.192
NPO	26	53	23.9	55.1	2.1	-2.1	4.41	4.41	.184	.080
	40	78							.457	.272

chi square = 0.729 - insignificant

Table - 47

LAWYER VS TEACHER

4 GHIT	L	T	L	T	L	T	L	T	L	T
PO	18	25	18.2	24.8	-.2	.2	.04	.04	.002	.001
NPO	39	53	38.8	53.2	.2	-.2	.04	.04	.001	.0007
	57	78							.003	.0017

chi square = 0.0047 - insignificant

Table - 48

Environmental Pressures

DOCTOR VERSUS ENGINEER

Item 4 RSU	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Environmental Pressure	5	4	3.5	5.5	1	-1	1	1	.285	.181
No Environmental Pressure	20	36	21.5	34.5	-1	1	1	1	.046	.014
	25	40							.331	.195

chi square = 0.526 - insignificant

Table - 49

DOCTOR VS LAWYER

4 RSU	D	L	D	L	D	L	D	L	D	L
EP	5	27	9.8	22.2	-4.8	4.8	23.04	23.04	2.351	1.037
NEP	20	30	15.2	34.8	4.8	-4.8	23.04	23.04	1.515	.662
	25	57							3.866	1.699

chi square = 5.565 - signifiant at 5% level

Table - 50

DOCTOR VS TEACHER

4 RSU	D	T	D	T	D	T	D	T	D	T
EP	5	32	9	28	-3.5	3.5	12.25	12.25	1.361	.437
NEP	20	46	16	50	3.5	-3.5	12.25	12.25	.765	.244
	25	78							2.126	.681

chi square = 2.807 - insignificant

Table - 51

ENGINEER VS LAWYER

4 RSU	E	L	E	L	E	L	E	L	E	L
EP	4	27	12.8	18.2	-8.8	8.8	77.44	77.44	6.050	4.254
NEP	36	30	27.2	38.8	8.8	-8.8	77.44	77.44	2.847	1.995
	40	57							8.897	6.249

chi square = 15.146 - significant at 1% level

Table - 52

ENGINEER VS TEACHER

4 RSU	E	T	E	T	E	T	E	T	E	T
EP	4	32	12.2	23.8	-8.2	8.2	67.24	67.24	5.511	2.825
NEP	36	46	27.8	54.2	8.2	-8.2	67.24	67.24	2.418	1.240
	40	78							7.929	4.065

chi square = 11.994 - significant at 1% level

Table - 53

LAWYER VS TEACHER

4 RSU	L	T	L	T	L	T	L	T	L	T
EP	27	32	24.9	34.1	2.1	-2.1	4.41	4.41	.177	.129
NEP	30	46	32.1	43.9	-2.1	2.1	4.41	4.41	.137	.100
	57	78							.314	.229

chi square = 0.543 - insignificant

Table - 54

Monetary Considerations

DOCTOR VERSUS ENGINEER

Item 4 KQ	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Monetary Considerations	15	22	14.2	228	.8	-.8	.64	.64	.045	.028
No Monetary Considerations	10	18	10.8	17.2	-.8	.8	.64	.64	.059	.037
	25	40							.104	.065

chi square = 0.160 - insignificant

Table - 55

DOCTOR VS LAWYER

4 KQ	D	L	D	L	D	L	D	L	D	L
MC	15	30	13.7	31.3	1.3	-1.3	1.69	1.69	.123	.053
NMC	10	27	11.3	25.7	-1.3	1.3	1.69	1.69	.149	.065
	25	57							.272	.118

chi square = 0.390 - insignificant

Table - 56

DOCTOR VERSUS TEACHER

4 KQ	D	T	D	T	D	T	D	T	D	T
MC	15	60	18.2	56.8	-2.7	2.7	7.29	7.29	.400	.128
NMC	10	18	6.8	21.2	2.7	-2.7	7.29	7.29	1.072	.343
	25	78							1.472	.471

chi square = 1.943 - insignificant

Table - 57

ENGINEER VS LAWYER

4 KQ	E	L	E	L	E	L	E	L	E	L
MC	22	30	21.4	30.6	.6	-.6	.36	.36	.016	.011
NMC	18	27	18.6	26.4	-.6	.6	.36	.36	.019	.013
	40	57							.035	.024

chi square = 0.059 - insignificant

Table - 58

ENGINEER VS TEACHER

4 KQ	E	T	E	T	E	T	E	T	E	T
MC	22	60	27.8	54.2	-5.8	5.8	33.64	33.64	1.210	.620
NMC	18	18	12.2	23.8	5.8	-5.8	33.64	33.64	2.757	1.413
	40	78							3.967	2.033

chi square = 6.000 - significant at 5% level

Table - 59

LAWYER VS TEACHER

4 KQ	L	T	L	T	L	T	L	T	L	T
MC	30	60	38	52	-8	8	64	64	1.684	1.230
NMC	27	18	19	26	8	-8	64	64	3.368	2.691
	57	78							5.052	3.691

chi square = 8.743 - significant at 1% level

Table - 60

Traditional Profession of the Family

DOCTOR VERSUS ENGINEER

Item 5	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Agreement	5	6	4.2	6.8	.3	-.3	.09	.09	.021	.013
Disagreement	20	34	20.8	33.2	-.3	.3	.09	.09	.004	.002
	25	40							.025	.015

chi square = 0.040 - insignificant

Table - 61

DOCTOR VS LAWYER

5	D	L	D	L	D	L	D	L	D	L
A	5	19	7.3	16.7	-1.8	1.8	3.24	3.24	.443	.194
DA	20	38	17.7	40.3	1.8	-1.8	3.24	3.24	.183	.080
	25	57							.626	.274

chi square = 0.900 - insignificant

Table - 62

DOCTOR VS TEACHER

5	D	T	D	T	D	T	D	T	D	T
A	5	13	4.4	13.6	.1	-.1	.01	.01	.002	.007
DA	20	65	20.6	64.4	-.1	.1	.01	.01	.004	.001
	25	78							.006	.008

chi square = 0.014 - insignificant

Table - 63

ENGINEER VS LAWYER

S	E	L	E	L	E	L	E	L	E	L
A	6	19	10.3	14.7	-4.3	4.3	18.49	18.49	1.795	1.257
DA	34	38	29.7	42.3	4.3	-4.3	18.49	18.49	.622	.563
	40	57							2.417	1.820

chi square = 4.237 - significant at 5% level

Table-64

ENGINEER VS TEACHER

S	E	T	E	T	E	T	E	T	E	T
A	6	13	6.4	12.6	-.9	.9	.81	.81	.126	.064
DA	34	65	33.6	65.4	.9	-.9	.81	.81	.024	.012
	40	78							.150	.076

chi square = 0.226 - insignificant

Table - 65

LAWYER VS TEACHER

S	L	T	L	T	L	T	L	T	L	T
A	19	13	13.5	18.5	5.5	-5.5	30.25	30.25	2.240	1.635
DA	38	65	43.5	59.5	-5.5	5.5	30.25	30.25	.695	.508
	57	78							2.935	2.143

chi square = 5.078 - significant at 5% level

Table - 66

Fulfilment of expectations

DOCTOR VERSUS ENGINEER

Item 10	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Yes	9	18	10.4	16.6	-1.4	1.4	1.96	1.96	.188	.118
No	16	22	14.6	23.4	1.4	-1.4	1.96	1.96	.134	.083
	25	40							.322	.201

chi square = 0.523 - insignificant

Table - 67

DOCTOR VS LAWYER

10	D	L	D	L	D	L	D	L	D	L
Yes	9	37	14	32	-5	5	25	25	1.785	.781
No	16	20	11	25	5	-5	25	25	2.272	1.000
	25	57							4.057	1.781

chi square = 5.838 - significant at 1% level

Table - 68

DOCTOR VS TEACHER

10	D	T	D	T	D	T	D	T	D	T
Yes	9	54	15.3	47.7	-6.3	6.3	39.69	39.69	2.594	.832
No	16	24	9.7	40.3	6.3	-6.3	39.69	39.69	4.091	.984
	25	78							6.685	1.816

chi square = 8.501 - significant at 1% level

Table - 69

ENGINEER VS LAWYER

10	E	L	E	L	E	L	E	L	E	L
Yes	18	37	22.7	32.3	-4.7	4.7	22.09	22.09	.973	.683
No	22	20	17.3	24.7	4.7	-4.7	22.09	22.09	1.276	.894
	40	57							2.249	1.577

chi square = 3.826 - insignificant

Table - 70

ENGINEER VS TEACHER

10	E	T	E	T	E	T	E	T	E	T
Yes	18	54	24.4	47.6	-6.4	6.4	40.96	40.96	1.678	.860
No	22	24	15.6	30.4	6.4	-6.4	40.96	40.96	2.625	1.347
	40	78							4.303	2.207

chi square = 6.510 - significant at 5 % level

Table - 71

LAWYER VS TEACHER

10	L	T	L	T	L	T	L	T	L	T
Yes	37	54	38.4	52.6	-1.4	1.4	1.96	1.96	.051	.037
No	20	24	18.6	25.4	1.4	-1.4	1.96	1.96	.105	.077
	57	78							.156	.114

chi square = 0.270 - insignificant

Table - 72

Satisfaction with the job

DOCTOR VS ENGINEER

Item 12	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Yes	14	24	14.6	23.4	.6	-.6	.36	.36	.024	.015
No	11	16	10.4	16.6	-.6	.6	.36	.36	.034	.021
	25	40							.058	.036

chi square = 0.094 - insignificant

Table - 73

DOCTOR VS LAWYER

12	D	L	D	L	D	L	D	L	D	L
Yes	14	25	11.9	27.1	2.1	-2.1	4.41	4.41	.370	.162
No	11	32	13.1	29.9	-2.1	2.1	4.41	4.41	.336	.147
	25	57							.706	.309

chi square = 1.015 - insignificant

Table - 74

DOCTOR VS TEACHER

12	D	T	D	T	D	T	D	T	D	T
Yes	14	46	14.6	45;4	-.6	.6	.36	.36	.024	.007
No	11	32	10.4	32.6	.6	-.6	.36	.36	.034	.011
	25	78							.058	.018

chi square = 0.076 - insignificant

Table - 75

ENGINEER VS LAWYER

12	E	L	E	L	E	L	E	L	E	L
Yes	24	25	20.2	28.8	3.8	-3.8	14.44	14.44	.714	.501
No	16	32	19.8	28.2	-3.8	3.8	14.44	14.44	.729	.512
	40	57							1.443	1.013

chi square = 2.456 - insignificant

Table - 76

ENGINEER VS TEACHER

12	E	T	E	T	E	T	E	T	E	T
Yes	24	46	23.7	46.3	.3	-.3	.09	.09	.003	.001
No	16	32	16.3	31.7	-.3	.3	.09	.09	.005	.002
	40	78							.008	.003

chi square = 0.011 - insignificant

Table - 77

LAWYER VS TEACHER

12	L	T	L	T	L	T	L	T	L	T
Yes	25	46	30	41	-5	5	25	25	.833	.609
No	32	32	27	37	5	-5	25	25	.925	.675
	57	78							1.758	1.284

chi square = 3.042 - insignificant

Table - 78

Personal satisfaction

DOCTOR VERSUS ENGINEER

Item 13	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Yes	16	18	13.1	20.9	2.9	-2.9	8.41	8.41	.641	.402
No	9	22	11.9	19.1	-2.9	2.9	8.41	8.41	.706	.440
	25	40							1.347	.842

chi square = 2.189 - insignificant

Table - 79

DOCTOR VS LAWYER

13	D	L	D	L	D	L	D	L	D	L
Yes	16	29	13.7	31.3	2.3	-2.3	5.29	5.29	.386	.169
No	9	28	11.3	25.7	-2.3	2.3	5.29	5.29	.468	.205
	25	78							.854	.374

chi square = 1.228 - insignificant

Table - 80

DOCTOR VS TEACHER

13	D	T	D	T	D	T	D	T	D	T
Yes	16	33	11.9	37.1	4.1	-4.1	16.81	16.81	1.412	.453
No	9	45	13.1	40.9	-4.1	4.1	16.81	16.81	1.283	.411
	25	78							2.695	.864

chi square = 3.559 - insignificant

Table - 81

ENGINEER VS LAWYER

13	E	L	E	L	E	L	E	L	E	L
Yes	18	29	19.4	27.6	-1.4	1.4	1.96	1.96	.101	.071
No	22	28	20.6	29.4	1.4	-1.4	1.96	1.96	.095	.066
	40	57							.196	.137

chi square = 0.333 - insignificant

Table - 82

ENGINEER VS TEACHER

13	E	T	E	T	E	T	E	T	E	T
Yes	18	33	17.3	33.7	.7	-.7	.49	.49	.028	.014
No	22	45	22.7	44.3	-.7	.7	.49	.49	.021	.011
	40	78							.049	.025

chi square = 0.074 - insignificant

Table - 83

LAWYER VS TEACHER

13	L	T	L	T	L	T	L	T	L	T
Yes	29	33	26.2	35.8	2.8	-2.8	7.84	7.84	.299	.218
No	28	45	30.8	42.2	-2.8	2.8	7.84	7.84	.254	.185
	57	78							.553	.403

chi square = 0.956 - insignificant

Table - 84

Father and son

DOCTOR VERSUS ENGINEER

Item 14	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Yes	17	23	15.4	24.6	1.6	-1.6	2.56	1.56	.166	.104
No	8	17	9.6	15.4	-1.6	1.6	2.56	1.56	.266	.166
	25	40							.432	.270

chi square = 0.702 - insignificant

Table - 85

DOCTOR VS LAWYER

14	D	L	D	L	D	L	D	L	D	L
Yes	17	9	7.9	18.1	8.6	-8.6	73.96	73.96	9.362	4.086
No	8	48	17.1	38.9	-8.6	8.6	73.96	73.96	4.325	1.901
	25	57							13.687	5.987

chi square = 19.674 - significant at 1% level

Table - 86

DOCTOR VS TEACHER

14	D	T	D	T	D	T	D	T	D	T
Yes	17	10	6.6	20.4	9.9	-9.9	98.01	98.01	14.850	4.804
No	8	68	18.4	57.6	-9.9	9.9	98.01	98.01	5.326	1.701
	25	78							20.176	6.505

chi square = 26.681 - significant at 1% level

Table - 87

ENGINEER VS LAWYER

14	E	L	E	L	E	L	E	L	E	L
Yes	23	9	13.2	18.8	9.8	-9.8	96.04	96.04	7.275	5.108
No	17	48	16.8	38.2	-9.8	9.8	96.04	96.04	5.716	2.514
	40	57							12.991	7.622

chi square = 20.613 - significant at 1% level

Table - 88

ENGINEER VS TEACHER

14	E	L	E	L	E	L	E	L	E	T
Yes	23	10	11.2	21.8	11.8	-11.8	139.24	139.24	12.432	6.387
No	17	68	28.8	56.2	-11.8	11.8	139.24	139.24	4.834	2.477
	40	78							17.266	8.864

chi square = 26.130 - significant at 1% level

Table - 89

LAWYER VS TEACHER

14	L	T	L	T	L	T	L	T	L	T
Yes	9	10	8	11	.5	-.5	.25	.25	.031	.022
No	48	68	49	67	-.5	.5	.25	.25	.005	.003
	57	78							.036	.025

chi square = 0.061 - insignificant

Table - 90

Early job identifications

DOCTOR VERSUS ENGINEER

Item 16	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Agreement	5	8	5	8	0.0	0.0	0.0	0.0	0.00	0.00
Disagreement	20	32	20	32	0.0	0.0	0.0	0.0	0.00	0.00
	25	57							0.00	0.00

chi square = 0.00 - insignificant

Table - 91

DOCTOR VS LAWYER

16	D	L	D	L	D	L	D	L	D	L
A	5	27	9.8	22.2	-4.8	4.8	23.04	23.04	2.351	1.037
DA	20	30	15.2	34.8	4.8	-4.8	23.04	23.04	1.515	.662
	25	57							3.866	1.699

chi square = 5.565 - significant at 5% level

Table - 92

DOCTOR VS TEACHER

16	D	T	D	T	D	T	D	T	D	T
A	5	18	5.6	17.4	-.1	.1	.01	.01	.001	.0005
DA	20	60	19.4	60.6	.1	-.1	.01	.01	.0005	.0001
	25	78							.0015	.0006

chi square = 0.0021 - insignificant

Table - 93

ENGINEER VS LAWYER

16	E	L	E	L	E	L	E	L	E	L
A	8	27	14.4	30.6	-6.4	6.4	40.96	40.96	2.844	1.338
DA	32	30	25.6	26.4	6.4	-6.4	40.96	40.96	1.600	1.551
	40	57							4.444	2.889

chi square = 7.333 - significant at 1% level

Table - 94

ENGINEER VS TEACHER

16	E	T	E	T	E	T	E	T	E	T
A	8	18	8.8	17.2	-.3	.3	.09	.09	.010	.005
DA	32	60	31.2	60.8	.3	-.3	.09	.09	.002	.001
	40	78							.012	.006

chi square = 0.018 - insignificant

Table - 95

LAWYER VS TEACHER

16	L	T	L	T	L	T	L	T	L	T
A	27	18	19	26	8	-8	64	64	3.368	2.461
DA	30	60	38	52	-8	8	64	64	1.684	1.230
	57	78							5.052	3.691

chi square = 8.743 - significant at 1% level

Table - 96

Awareness to earn a living

DOCTOR VERSUS ENGINEER

Item 17	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Awareness at School level	6	15	8.1	12.9	-1.6	1.6	2.56	2.56	.316	.198
Awareness at College level	19	25	16.9	27.1	1.6	-1.6	2.56	2.56	.151	.094
	25	40							.467	.292

chi square = 0.759 - insignificant

Table - 97

DOCTOR VS LAWYER

17	D	L	D	L	D	L	D	L	D	L
ASL	6	9	4.6	10.4	.9	-.9	.81	.81	.176	.077
ACL	19	48	20.4	46.6	-.9	.9	.81	.81	.039	.017
	25	57							.215	.094

chi square = 0.309 - insignificant

Table - 98

DOCTOR VS TEACHER

17	D	T	D	T	D	T	D	T	D	T
ASL	6	16	5.3	16.7	.2	-.2	.04	.04	.007	.002
ACL	19	62	19.7	61.3	-.2	.2	.04	.04	.002	.0006
	25	78							.009	.0026

chi square = 0.0116 - insignificant

Table - 99

ENGINEER VS LAWYER

17	E	L	E	L	E	L	E	L	E	L
ASL	15	9	9.9	14.1	5.1	-5.1	26.01	26.01	2.627	1.844
ACL	25	48	30.1	42.9	-5.1	5.1	26.01	26.01	.864	.606
	40	57							3.491	2.450

chi square = 5.941 - significant at 5% level

Table - 100

ENGINEER VS TEACHER

17	E	T	E	T	E	T	E	T	E	T
ASL	15	16	10.5	20.5	4.5	-4.5	20.25	20.25	1.928	.987
ACL	25	62	29.5	57.5	-4.5	4.5	20.25	20.25	.686	.352
	40	78							2.614	1.339

chi square = 3.953 - significant at 5% level

Table - 101

LAWYER VS TEACHER

17	L	T	L	T	L	T	L	T	L	T
ASL	9	16	10.6	14.4	-1.6	1.6	2.56	2.56	.241	.177
ACL	48	62	46.4	63.6	1.6	-1.6	2.56	2.56	.055	.040
	57	78							.296	.217

chi square = 0.513 - insignificant

Table - 102

Decision to enter a profession

DOCTOR VERSUS ENGINEER

Item 18	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Decision at School	7	6	5	8	1.5	-1.5	2.25	2.25	.450	.281
Decision at College	18	34	20	32	-1.5	1.5	2.25	2.25	.112	.070
	25	40							.562	.351

chi square = 0.913 - insignificant

Table - 103

DOCTOR VS LAWYER

18	D	L	D	L	D	L	D	L	D	L
DS	7	6	4	9	2.5	-2.5	6.25	6.25	1.562	.694
DC	18	51	21	48	-2.5	2.5	6.25	6.25	.297	.130
	25	57							1.859	.824

chi square = 2.683 - insignificant

Table - 104

DOCTOR VS TEACHER

18	D	T	D	T	D	T	D	T	D	T
DS	7	13	4.9	15.1	2.1	-2.1	4.41	4.41	.900	.292
DC	18	65	20.1	62.9	-2.1	2.1	4.41	4.41	.219	.070
	25	78							1.119	.362

chi square = 1.481 - insignificant

Table - 105

ENGINEER VS LAWYER

18	E	L	E	L	E	L	E	L	E	L
DS	6	6	4.9	7.1	.6	-.6	.36	.36	.073	.050
DC	34	51	35.1	49.9	-.6	.6	.36	.36	.010	.007
	40	57							.083	.057

chi square = 0.140 - insignificant

Table - 106

ENGINEER VS TEACHER

18	E	T	E	T	E	T	E	T	E	T
DS	6	13	6.4	12.6	.1	-.1	.01	.01	.001	.0007
DC	34	65	33.6	65.4	-.1	.1	.01	.01	.0002	.0001
	40	78							.0012	.0008

chi square = 0.0020 - insignificant

Table - 107

LAWYER VS TEACHER

18	L	T	L	T	L	T	L	T	L	T
DS	6	13	8	11	-1.5	1.5	2.25	2.25	.281	.204
DC	51	65	49	67	1.5	-1.5	2.25	2.25	.045	.033
	57	78							.326	.237

chi square = 0.563 - insignificant

Table - 108

Childhood vocations

DOCTOR VS ENGINEER

Item 19	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Agreement	6	8	5.4	8.6	.1	-.1	.01	.01	.001	.001
Disagreement	19	32	19.6	31.4	-.1	.1	.01	.01	.0005	.0003
	25	40							.0015	.0013

chi square = 0.0028 - insignificant

Table - 109

DOCTOR VS LAWYER

19	D	L	D	L	D	L	D	L	D	L
A	6	11	5.2	11.8	.3	-.3	.09	.09	.017	.007
DA	19	46	19.8	45.2	-.3	.3	.09	.09	.004	.001
	25	57							.021	.008

chi square = 0.029 - insignificant

Table - 110

DOCTOR VS TEACHER

19	D	T	D	T	D	T	D	T	D	T
A	6	36	10.2	31.8	-4.2	4.2	17.64	17.64	1.729	.554
DA	19	42	14.8	46.2	4.2	-4.2	17.64	17.65	1.192	.381
	25	78							2.921	.935

chi square 0 3.856 - significant at 5% level

Table - 111

ENGINEER VS LAWYER

19	E	L	E	L	E	L	E	L	E	L
A	8	11	7.8	11.2	-.3	.3	.09	.09	.011	.008
DA	32	46	32.2	45.8	.3	-.3	.09	.09	.002	.001
	40	57							.013	.009

chi square = 0.022 - insignificant

Table - 112

ENGINEER VS TEACHER

19	E	T	E	T	E	T	E	T	E	T
A	8	36	14.9	29.1	-6.9	6.9	47.61	47.61	3.195	1.636
DA	32	42	25.1	48.9	6.9	-6.9	47.61	47.61	1.896	.973
	40	78							5.091	2.609

chi square = 7.700 - significant at 1% level

Table - 113

LAWYER VS TEACHER

19	L	T	L	T	L	T	L	T	L	T
A	11	36	19.8	27.2	-8.8	8.8	77.44	77.44	3.911	2.847
DA	46	42	37.2	50.8	8.8	-8.8	77.44	77.44	2.081	1.524
	57	78							5.992	4.371

chi square = 10.363 - significant at 1% level

Table - 114

Occupational choice after High School

DOCTOR VERSUS ENGINEER

Item 20	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Decision	12	8	7.7	12.3	3.8	-3.8	14.44	14.44	1.875	1.173
No Decision	13	32	17.3	27.7	-3.8	3.8	14.44	14.44	.834	.521
	25	40							2.709	1.694

chi square = 4.403 - significant at 5%

Table - 115

DOCTOR VS LAWYER

20	D	L	D	L	D	L	D	L	D	L
D	12	9	6.4	14.6	3.1	-3.1	9.61	9.61	1.501	.658
ND	13	48	18.6	42.4	-3.1	3.1	9.61	9.61	.834	.521
	25	57							2.017	.884

chi square =2.901 - insignificant

Table - 116

DOCTOR VS TEACHER

20	D	T	D	T	D	T	D	T	D	T
D	12	15	6.6	20.4	4.9	-4.9	24.01	24.01	3.637	1.176
ND	13	63	18.4	57.6	-4.9	4.9	24.01	24.01	1.304	.416
	25	78							4.941	1.592

chi square = 6.533 - significant at 5 % level

Table - 117

ENGINEER VS LAWYER

20	E	L	E	L	E	L	E	L	E	L
D	8	9	7	10	.5	-.5	.25	.25	.035	.025
ND	32	48	33	47	-.5	.5	.25	.25	.007	.005
	40	57							.042	.030

chi square = 0.072 - insignificant

Table - 118

ENGINEER VS TEACHER

20	E	T	E	T	E	T	E	T	E	T
D	8	15	7.8	15.2	-.3	.3	.09	.09	.011	.005
ND	32	63	32.2	62.8	.3	-.3	.09	.09	.002	.001
	40	78							.013	.006

chi square = 0.019 - insignificant

Table - 119

LAWYER VS TEACHER

20	L	T	L	T	L	T	L	T	L	T
D	9	15	10.1	13.9	-1.1	1.1	1.21	1.21	.119	.087
ND	48	63	46.9	64.1	1.1	-1.1	1.21	1.21	.025	.018
	57	78							.144	.105

chi square = 0.249 - insignificant

Table - 120

Teacher's influence

DOCTOR VERSUS ENGINEER

Item 22	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Impressed	18	23	15.8	25.2	1.7	-1.7	2.89	2.89	.182	.114
Not Impressed	7	17	9.2	14.8	-1.7	1.7	2.89	2.89	.314	.195
	25	40							.496	.309

chi square = 0.805 - insignificant

Table - 121

DOCTOR VS LAWYER

22	D	L	D	L	D	L	D	L	D	L
I	18	34	15.9	36.1	1.6	-1.6	2.56	2.56	.161	.070
NI	7	23	9.1	20.9	-1.6	1.6	2.56	2.56	.281	.122
	25	57							.442	.192

chi square = 0.634 - insignificant

Table - 122

DOCTOR VS TEACHER

22	D	T	D	T	D	T	D	T	D	T
I	18	67	20.6	64.4	-2.6	2.6	6.76	6.76	.328	.104
NI	7	11	4.4	13.6	2.6	-2.6	6.76	6.76	1.536	.497
	25	78							1.864	.601

chi square = 2.465 - insignificant

Table - 123

ENGINEER VS LAWYER

22	E	L	E	L	E	L	E	L	E	L
I	23	34	23.5	33.5	-.5	.5	.25	.25	.010	.007
NI	17	23	16.5	23.5	.5	-.5	.25	.25	.015	.010
	40	57							.025	.017

chi square = 0.042 - insignificant

Table - 124

ENGINEER VS TEACHER

22	E	T	E	T	E	T	E	T	E	T
I	23	67	30.5	59.5	-7	7	49	49	1.606	.823
NI	17	11	9.5	18.5	7	-7	49	49	5.157	2.648
	40	78							6.763	3.471

chi square = 10.234 - significant at 1% level

Table-125

LAWYER VS TEACHER

22	L	T	L	T	L	T	L	T	L	T
I	34	67	42.6	58.4	-8.6	8.6	73.96	73.96	1.736	1.266
NI	23	11	14.4	19.6	8.6	-8.6	73.96	73.96	5.136	3.773
	57	78							6.872	5.039

chi square = 11.911 - significant at 1% level

Table - 126

School subjects and present profession

DOCTOR VERSUS ENGINEER

Item 25	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Agreement	18	34	20	32	-1.5	1.5	2.25	2.25	.112	.070
Disagreement	7	6	5	8	1.5	-1.5	2.25	2.25	.450	.281
	25	40							.562	.351

chi square = 0.913 - insignificant

Table - 127

DOCTOR VS LAWYER

25	D	L	D	L	D	L	D	L	D	L
A	18	45	19.2	43.8	-.7	.7	.49	.49	.025	.011
DA	7	12	5.8	13.2	.7	-.7	.49	.49	.084	.037
	25	57							.109	.048

chi square = 0.157 - insignificant

Table - 128

DOCTOR VS TEACHER

25	D	T	D	T	D	T	D	T	D	T
A	18	67	20.6	64.4	-2.6	2.6	6.76	6.76	.328	.104
DA	7	11	4.4	13.6	2.6	-2.6	6.76	6.76	1.536	.497
	25	78							1.864	.601

chi square = 2.465 - insignificant

Table - 129

ENGINEER VS LAWYER

25	E	L	E	L	E	L	E	L	E	L
A	34	45	32.6	46.4	.9	-.9	.81	.81	.024	.017
DA	6	12	7.4	10.6	-.9	.9	.81	.81	.109	.076
	40	57							.133	.093

chi square = 0.226 - insignificant

Table - 130

ENGINEER VS TEACHER

25	E	T	E	T	E	T	E	T	E	T
A	34	67	34.2	66.8	.3	-.3	.09	.09	.002	.001
DA	6	11	5.8	11.2	-.3	.3	.09	.09	.015	.008
	40	78							.017	.009

chi square = 0.026 - insignificant

Table - 131

LAWYER VS TEACHER

25	L	T	L	T	L	T	L	T	L	T
A	45	67	47.3	64.7	-2.3	2.3	5.29	5.29	.111	.081
DA	12	11	9.7	13.3	2.3	-2.3	5.29	5.29	.545	.397
	57	78							.656	.478

chi square = 1.134 - insignificant

Table - 132

College subjects & present profession

DOCTOR VERSUS ENGINEER

Item 26	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
A	20	36	21.5	34.5	-1	1	1	1	.046	.028
DA	5	4	3.5	5.5	1	-1	1	1	.285	.181
	25	40							.331	.209

chi square = 0.540 - insignificant

Table - 133

DOCTOR VS LAWYER

26	D	L	D	L	D	L	D	L	D	L
A	20	47	20.4	46.6	.1	-.1	.01	.01	.0004	.0002
DA	5	10	4.6	10.4	-.1	.1	.01	.01	.002	.0009
	25	57							.0024	.0011

chi square = 0.0035 - insignificant

Table - 134

DOCTOR VS TEACHER

26	D	T	D	T	D	T	D	T	D	T
A	20	69	21.6	67.4	-1.1	1.1	1.21	1.21	.056	.017
DA	5	9	3.4	10.6	1.1	-1.1	1.21	1.21	.355	.114
	25	78							.411	.131

chi square = 0.542 - insignificant

Table - 135

ENGINEER VS LAWYER

26	E	L	E	L	E	L	E	L	E	L
A	36	47	34.2	48.8	1.3	-1.3	1.69	1.69	.049	.034
DA	4	10	5.8	8.2	-1.3	1.3	1.69	1.69	.291	.206
	40	57							.340	.240

chi square = 0.580 - insignificant

Table - 136

ENGINEER VS TEACHER

26	E	T	E	T	E	T	E	T	E	T
A	36	69	35.6	69.4	-.1	.1	.01	.01	.0002	.0001
DA	4	9	4.4	8.6	.1	-.1	.01	.01	.002	.001
	40	78							.0022	.0011

chi square = 0.0033 - insignificant

Table - 137

LAWYER VS TEACHER

26	L	T	L	T	L	T	L	T	L	T
A	47	69	49	67	-1.5	1.5	2.25	2.25	.045	.033
DA	10	9	8	11	1.5	-1.5	2.25	2.25	.281	.204
	57	78							.326	.237

chi square = 0.563 - insignificant

Table - 138

Knowledge of the world of work

DOCTOR VERSUS ENGINEER

Item 32	fo		fe		fo-fe		$(fo-fe)^2$		$\frac{(fo-fe)^2}{fe}$	
	D	E	D	E	D	E	D	E	D	E
Information	16	27	16.5	26.5	0.0	0.0	0.0	0.0	0.00	0.00
No information	9	13	8.5	13.5	0.0	0.0	0.0	0.0	0.00	0.00
	25	40							0.00	0.00

chi square = 0.0 - insignificant

Table - 139

DOCTOR VS LAWYER

32	D	L	D	L	D	L	D	L	D	L
I	16	34	15.2	34.8	.8	-.8	.64	.64	.042	.018
NI	9	23	9.8	22.2	-.8	.8	.64	.64	.065	.028
	25	57							.107	.046

chi square = 0.153 - insignificant

Table - 140

DOCTOR VS TEACHER

32	D	T	D	T	D	T	D	T	D	T
I	16	40	13.6	42.4	2.4	-2.4	5.76	5.76	.423	.135
NI	9	38	11.4	35.6	-2.4	2.4	5.76	5.76	.505	.161
	25	78							.928	.296

chi square = 1.224 - insignificant

Table - 141

ENGINEER VS LAWYER

32	E	L	E	L	E	L	E	L	E	L
I	27	34	27.2	33.8	-.2	.2	.04	.04	.001	.001
NI	13	23	12.8	23.2	.2	-.2	.04	.04	.003	.001
	40	57							.004	.002

chi square = 0.006 - insignificant

Table - 142

ENGINEER VS TEACHER

32	E	T	E	T	E	T	E	T	E	T
I	27	40	22.7	44.3	4.3	-4.3	18.49	18.49	.814	.417
NI	13	38	17.3	33.7	-4.3	4.3	18.49	18.49	1.068	.548
	40	78							1.882	.965

chi square = 2.847 - insignificant

Table - 143

LAWYER VS TEACHER

32	L	T	L	T	L	T	L	T	L	T
I	34	40	31.2	42.8	2.8	-2.8	7.84	7.84	.251	.183
NI	23	38	25.8	35.2	-2.8	2.8	7.84	7.84	.303	.222
	57	78							.554	.405

chi square = 0.959 - insignificant

Chi square values in the case of items A, 4AB, 12, 13, 18, 25, 26 and 32 are insignificant regarding all the groups. It may, therefore, be inferred that there are no differences in between Doctors and Engineers, Doctors and Lawyers, Doctors and Teachers, Engineers and Lawyers, Engineers and Teachers and also in between Lawyers and Teachers when their choices are influenced by their fathers' occupation or identification with people or by considerations of their satisfaction with their job or personal satisfaction or the time of the decision to enter a profession or the choice of subjects at school or college or the considerations regarding their knowledge of the requirements of the occupation which they wanted to enter.

Chi square values of all items (except item 20) for the Doctor-Engineer group are insignificant which shows that Doctors and Engineers do not differ in the choice of their occupations when it is governed by any of the considerations except regarding their choice at high school level (item 20). Chi square value on item 20 is significant at 5% level and it may, therefore, be inferred that Doctors and Engineers differ in their choice of occupation when the level (High School or College) at which they took at least a tentative decision to adopt a particular profession is taken into consideration.

Chi square values of items 3, 4RSU and 16 are significant at 5% level and those of items 10 and 14 at 1% level for the Doctor-Lawyer group which show that there are significant differences in between Doctors and Lawyers in the choice of vocations when advise of parents, environmental pressures or circumstances, considerations of fulfilment of expectations from the job, consideration of occupations for their own progeny and early job identifications are taken into consideration as factors influencing

the choice of an occupation.

For this, i.e., Doctor-Lawyer group chi square values on all other items are insignificant showing that there are no differences in their choice of occupation when these factors are taken into consideration as the determinants of choice.

For the Doctor-Teacher group chi square values are significant on items 19 and 20 at 5% level and on items 3, 10 and 14 at 1% level it may, therefore, be inferred that Doctors and Teachers differ in their occupational choices when advice of parents, fulfilment of expectations from the job, considerations of occupations of their own offspring, favourite vocations of their own childhood and their choice of occupation at high school level are taken into consideration.

On all other items chi square values are insignificant for this group showing that Doctors and Teachers do not differ in their occupational choice when items other than those mentioned above are taken into consideration as factors influencing the vocational choice.

Chi square values for the Engineer-Lawyer group are significant on items 5 and 17 at 5% level and on items 4RSU, 14 and 16 at 1% level it may,therefore, be inferred that Engineers and Lawyers differ in their choice of occupations when the traditional family profession, awareness to earn a living, environmental pressures or circumstances, entry of their children in their own occupations and their own early identifications are taken into consideration as factors influencing their vocational choice.

On all items except the ones referred to above chi square values are

insignificant for this group showing that Engineers and Lawyers do not differ in regard of their occupational choice when other items are taken into consideration as factors influencing vocational choice.

Values of the chi square for the Engineer-Teacher group on items 4DEF, 4CIMV, 4KQ, 10 and 17 being significant at the 5% level and that of items 3, 4RSU, 14, 19 and 22 being significant at 1% level it may be inferred that Engineers and Teachers differ in their choice of occupation when social and humanitarian considerations, considerations regarding their own suitability, abilities and experience, monetary considerations, fulfilment of expectations, awareness to earn a living, advice of parents, environmental presaures or circumstances, entry of their sons in their own professions, favourite vocations of their childhood and influence of teachers are taken as the deciding factors in entering a vocation.

For this group on all other items except the ones mentioned above the values of chi square are insignificant which shows that when these other items are taken as criteria for choosing an occupation there are no differences in between Engineers and Teachers.

Chi square values for the Lawyer-Teacher group are significant on items 3, 4DEF, 4JNO, 4CIMV, 4KQ, 16, 19 and 22 at 1% level and only item 5 at 5% it may, therefore, be inferred that there are marked differences in between Lawyers and Teachers when advice of parents, social and humanitarion considerations, considerations of power and authority, considerations regarding suitability, abilities and experience of the job, monetary considerations, early jobs identifications, favourite vocation of childhood, influence of teachers and traditional profession of the family are taken as

criteria for the choice of vocation.

Chi square values for this group on items other than the ones mentioned above are insignificant which shows that there are no differences between Lawyers and Teachers when these other items are considered as criteria of choice.

For the sake of brevity statistical interpretations are given in this chapter group-wise rather than item-wise. In the next chapter a detailed discussion of these results including the discussion of the direction of chi square and its interpretation is to follow.

TABLES SHOWING THE RESULTS OF BINOMIAL TEST APPLIED ON THE DATA OF EACH SEPARATE GROUP

Table - 144

Results of the small sample Binomial test applied on data obtained from doctors' group

Item	N	Smaller frequency (X)	Probability (P)	Level of Significance	Decision on HO.
A	25	3	.001	.01	Rejected
3	25	6	.007	.01	Rejected
4DEF	25	10	.212	.05	Accepted
4JNO	25	11	.345	.05	Accepted
4CLMV	25	9	.115	.05	Accepted
4AB	25	12	.500	.05	Accepted
4GHIT	25	10	.212	.05	Accepted
4RSU	25	5	.002	.01	Rejected
4KQ	25	10	.212	.05	Accepted
5	25	5	.002	.01	Rejected
10	25	9	.115	.05	Accepted
12	25	11	.345	.05	Accepted
13	25	9	.115	.05	Accepted
14	25	8	.054	.05	Accepted
16	25	5	.002	.01	Rejected
17	25	6	.007	.01	Rejected
18	25	7	.022	.05	Rejected
19	25	6	.007	.01	Rejected
20	25	12	.500	.05	Accepted
22	25	7	.022	.05	Rejected
25	25	7	.022	.05	Rejected
26	25	5	.002	.01	Rejected
32	26	9	.115	.05	Accepted

Table - 145

Results of the large sample Binomial test applied on data obtained from Engineers' group.

Item	Z	Probability (P)	Level of significance	Decision on Ho.
A	-4.27	.00003	.01	Rejected
3	-0.47	.3192	.05	Accepted
4DEF	-0.15	.4404	.05	Accepted
4JNO	-0.47	.3192	.05	Accepted
4CLMV	-0.79	.2148	.05	Accepted
4AB	-2.37	.0212	.05	Rejected
4GHIT	-1.74	.1423	.05	Accepted
4RSU	-4.90	.00003	.01	Rejected
4KQ	-0.47	.3192	.05	Accepted
5	-4.27	.00003	.01	Rejected
10	-0.47	.3192	.05	Accepted
12	-1.10	.1562	.05	Accepted
13	-0.47	.3192	.05	Accepted
14	-0.79	.2148	.05	Accepted
16	-3.63	.0011	.01	Rejected
17	-1.42	14.92	.05	Accepted
18	-4.27	.00003	.01	Rejected
19	-3.63	.0011	.01	Rejected
20	-3.63	.0011	.01	Rejected
22	0.79	.2148	.05	Accepted
25	-4.27	.00003	.05	Rejected
26	-4.90	.00003	.01	Rejected
32	-2.05	.0228	.05	Rejected

Table - 146

Results of the large sample Binomial test applied on data obtained from Lawyers' group

Item	Z	Probability (P)	Level of Significance	Decision on Ho
A	-5.30	.00003	.01	Rejected
3	-0.26	.3974	.05	Accepted
4DEF	-1.89	.1401	.05	Rejected
4JNO	-1.59	.1469	.05	Accepted
4CLMV	-0.26	.3974	.05	Accepted
4AB	-2.12	.0222	.05	Rejected
4GHIT	-2.65	.0197	.05	Rejected
4RSU	-0.26	.3974	.05	Accepted
4KQ	-0.26	.3974	.05	Accepted
5	-2.38	.0212	.05	Rejected
10	-2.12	.0222	.05	Rejected
12	-0.79	.2148	.05	Accepted
13	-0.00	-	-	-
14	-5.03	.00003	.01	Rejected
16	-0.26	.3974	.05	Accepted
17	-5.03	.00003	.01	Rejected
18	-5.83	.00003	.01	Rejected
19	-4.50	.00003	.01	Rejected
20	-5.03	.00003	.01	Rejected
22	-1.32	.1515	.05	Accepted
25	-4.24	.00003	.01	Rejected
26	-4.77	.00003	.01	Rejected
32	-1.32	.1515	.05	Accepted

Table - 147

Results of the large sample Binomial test applied on data obtained from Teachers' group

Item	Z	Probability (P)	Level of Significance	Decision on Ho
A	-6.23	.00003	.01	Rejected
3	-4.64	.00003	.01	Rejected
4DEF	-3.96	.0010	.01	Rejected
4JNO	-3.51	.0011	.01	Rejected
4CLMV	-4.42	.00003	.01	Rejected
4AB	-0.99	.1641	.05	Accepted
4GHIT	-3.06	.0013	.01	Rejected
4RSU	-1.47	.1492	.05	Accepted
4KQ	-4.64	.00003	.01	Rejected
5	-5.78	.00003	.01	Rejected
10	-3.28	.0013	.01	Rejected
12	-1.47	.1492	.05	Accepted
13	-1.24	.1539	.05	Accepted
14	-6.46	.00003	.01	Rejected
16	-4.64	.00003	.01	Rejected
17	-5.10	.00003	.01	Rejected
18	-5.78	.00003	.01	Rejected
19	-0.56	.3085	.05	Accepted
20	-5.32	.00003	.01	Rejected
22	-6.23	.00003	.01	Rejected
25	-6.23	.00003	.01	Rejected
26	-6.68	.00003	.01	Rejected
32	-0.001	.50000	.05	Accepted

Table - 148

Results of the large sample Binomial test applied on data obtained from the Combined Professional Group as a Whole

Item	Z	Probability (P)	Level of significance	Decision on Ho
A	-10.11	.00003	.01	Rejected
3	- 1.48	.1336	.01	Accepted
4DEF	- 4.03	.00003	.01	Rejected
4JNO	- 4.03	.00003	.01	Rejected
4CLMV	- 3.88	.00007	.01	Rejected
4AB	- 3.04	.0012	.01	Rejected
4GHIT	- 4.59	.00003	.01	Rejected
4RSU	- 4.45	.00003	.01	Rejected
4KQ	- 3.74	.00011	.01	Rejected
5	- 7.99	.00003	.01	Rejected
10	- 4.03	.00003	.01	Rejected
12	- 1.20	.2302	.05	Accepted
13	- 1.62	.0526	.05	Accepted
14	- 7.85	.00003	.01	Rejected
16	- 5.86	.00003	.01	Rejected
17	- 7.56	.00003	.01	Rejected
18	- 9.54	.00003	.01	Rejected
19	- 5.44	.00003	.01	Rejected
20	- 7.85	.00003	.01	Rejected
22	- 5.86	.00003	.01	Rejected
25	- 8.98	.00003	.01	Rejected
26	-10.11	.00003	.01	Rejected
32	- 2.33	.0212	.05	Rejected

TABLES SHOWING CRITICAL RATIOS FOR THE DATA OBTAINED EACH SEPARATE GROUP

Table - 149

Showing CR for the Data obtained from Doctors' group

Item	:	CR		Item	:	CR
A		3.8**		13		1.4
3		2.8**		14		1.8
4DEF		1.0		16		3.0**
4JNO		0.6		17		2.6**
4CLMV		1.4		18		2.2**
4AB		0.2		19		2.6**
4GHIT		1.0		20		0.2
4RSU		3.0**		22		2.2**
4KQ		1.0		25		2.2**
5		3.0**		26		3.0**
10		1.4		32		1.4
12		0.6				

Table - 150

Showing CR for the Data obtained from Engineers' group

Item	:	CR		Item	:	CR
A		4.430**		13		0.632
3		0.632		14		0.949
4DEF		0.316		16		3.797**
4JNO		0.632		17		1.582
4CLMV		0.949		18		4.430**
4AB		2.531*		19		3.797**
4GHIT		1.898		20		3.797**
4RSU		5.063**		22		0.949
4KQ		0.632		25		4.430**
5		4.430**		26		5.063**
10		0.632		32		2.215*
12		1.265				

Table - 151

Showing CR for the Data obtained from Lawyers' group

Item	:	CR	Item	:	CR
A		5.437**	13		0.132
3		0.397	14		5.172**
4DEF		1.989*	16		0.397
4JNO		1.724	17		5.172**
4CLMV		0.397	18		5.968**
4AB		2.254*	19		4.641**
4GHIT		2.931**	20		5.172**
4RSU		0.397	22		1.458
4KQ		0.397	25		4.378**
5		2.519*	26		4.907**
10		2.254*	32		1.458
12		0.928			

Table - 152

Showing CR for the Data obtained from Teachers' group

Item	:	CR	Item	:	CR
A		6.349**	13		1.360
3		4.761**	14		6.575**
4DEF		4.081**	16		4.761**
4JNO		3.628**	17		5.215**
4CLMV		4.535**	18		5.895**
4AB		1.133	19		0.680
4GHIT		3.174**	20		5.442**
4RSU		1.587	22		6.349**
4KQ		4.761**	25		6.349**
5		5.895**	26		6.802**
10		3.401**	32		0.226
12		1.587			

CHAPTER - V

DISCUSSION & INTERPRETATION OF THE DATA OBTAINED

A review of the literature has shown many a variable, like, family influences, educational background, social motivation and other pressures exerting a determining influence in the process of occupational choice making.

The present study and, therefore, the discussion here, attempts to analyse and interpret the dynamics of occupational choice making. For this purpose the data has been classified in different categories. The questionnaire administered to the sample population of this investigation tapped many areas and aspects of the choice making process. However, a selection of the more important items of the questionnaire has been made and in this process questions which touched the periphery of the central theme have been excluded. It may be pointed out, in this connection, that since the approach adopted in the present study is quantitative rather than qualitative, some of the questions which probed into the personal dynamics and required a depth analysis approach have also been left out. It seems proper to emphasize that although longitudinal studies may prove more rewarding, no such attempt has been made here, simply because such an attempt was not feasible in the present case. A quotation from Terman(1) illustrates this point succinctly when he alludes that "The longitudinal study is costly in time, labor, and money. To carry through enough subjects in this way to get reliable statistical data is usually impossible without research funds that seem to the college professor astronomical in

size. The only reason that I am able to report to you ... a few results from a longitudinal study of a large gifted population is that I have been lucky enough to find people willing to invest more than a hundred thousand dollars to make such an investigation possible. It is still the only large population of any kind - bright, average or dull - that has been studied so intensively over so long a period from childhood into adult life."

Although we have not been able to adopt the longitudinal approach, an attempt is made to study a cross-section of the population in such a way that individual subjects are able to build up a retrospective picture of the earlier influences which played a part in their occupational-decision-making. A rationale of this approach has been given in the introductory chapter.

Discussion and interpretation of the data obtained is undertaken in the following three ways:

I. Inter-group Comparisons:

In this part a comparison of the following groups is made:

Doctors with Engineers
Doctors with Lawyers
Doctors with Teachers
Engineers with Lawyers
Engineers with Teachers
Lawyers with Teachers

} A comparison of each separate group with the other groups is made on each item of the questionnaire taken up for analysis.

II. Item-wise Comparison Within Each Separate Group:

Each separate group viz. Doctors, Engineers, Lawyers and Teachers is taken up for analysis on each item of the questionnaire in this section.

III. Combined Professional Group as a Whole:

All the four groups have been lumped together and termed Professional group. The data obtained for the Professional group as a whole is taken up for analysis in this section.

I. Inter-group Comparisons:

Item 'A' - Influence of father's occupation:

Item 'A' refers to the column "Father's occupation" in the preliminaries of the questionnaire (Appendix 'C') where the respondent was asked to

mention his father's occupation. An analysis of this item is undertaken in order to find out the indirect role which father's occupation plays in the occupational choice of the son.

The chi square value is insignificant and the fo column of table 6 shows that an overwhelmingly large number of doctors and engineers adopted professions different from the occupations of their fathers. Investigation after investigation reports that there is a preponderance of the choice of the professions in the occupational choice of students irrespective of the nature of their fathers' occupations. Sisson(2), for example, has reported that although only one third of the fathers of his subjects were in the professions, as many as 83% of them chose the coveted professions.

While explaining our own results that occupational choices of sons are not influenced by the occupations of their fathers, we shall have to keep an eye on the social moorings of our society during the thirties. The fathers of our subjects were neither engineers nor doctors because they would have chosen their occupations during the first two decades of this century when engineering was almost an unknown profession and modern medical practice was a profession still to be commonly aspired for. On the other hand, during the late thirties, World War II broke out which gave rise to a tremendous need for and, therefore, an emphasis on professions like engineering and medicine. This social circumstance, irrespective of the occupations of the fathers, attracted the younger generation of the urban middle class to the professions of engineering and medicine. Moreover,

western education had given a new orientation to the thinking of Indian youth so that they were breaking away from parental apron-strings, which, as Beeson and Tope(3) have pointed out, shows that the subjects were doing some thinking for themselves instead of passively following the occupations of their fathers.

No significant differences were found to exist between doctors and lawyers in their occupational choice as a result of the influence of the occupations of their fathers (cf. Table 7). During the thirties when our subjects were studying in schools and colleges, not only medicine but law also was a prestige bearing and socially valued profession. Almost all the prestige bearing figures of that period had their training in law and most of them were successful practicing lawyers. Quite a number of them had adopted some of the western ways of living, cultural standards and etiquette and many of them were actively involved in the political struggle which had lent the legal profession an added charm for those young men who were receiving western education. We know that dominant social trends and events create fads of choosing certain professions - engineering at the present stage being a case in point - hence the choice of law during that period irrespective of the occupation of the fathers of our subjects.

For all the remaining groups, on this item, chi square values are found to be insignificant (cf. Tables 8 to 11). Explaining these findings it may be pointed out that the fathers of the thirties were, in most cases, traditionally educated middle class people, belonging to the zamindar

families. By this time western education had been accepted as the superior type of education. Loyalty to the British regime and praise for the greatness of Britishers was almost an article of faith with this class. To be nearer and like the masters was, perhaps, the sole aim and ideal of these people which could best be achieved by educating their own children in the western way. Thus, although, the fathers of our subjects were, themselves, not educated in the western way and, therefore, could not choose any of the professions, their sons having received western education increasingly opted for the professions. This result is corroborated by the findings of Sisson(4), Sparling(5) and others which clearly state that the choice of professions on the part of their subjects was not influenced by the occupations of the non-professional fathers.

Item 3 - Advice of parents and others:

Comparing doctors and engineers we find that the two do not differ in so far as advice of their respective parents, guardians and relatives is concerned (cf. Table 12). The older generation, i.e., parents and relatives etc., it seems, did not realize the importance of engineering and medicine even during the thirties. The long and costly training required to be undergone for these professions, along with the lack of facilities and difficulties of getting admittance to the few, then existing, engineering and medical colleges, seem to be some of the considerations which did not encourage the parents and relatives to advise the younger generation to adopt these professions. Over and above these considerations, there was little awareness among the elders, of the vast possibilities of progress and development

along these professions, which resulted in distributing their preference rather evenly between engineering and medicine as professions for the younger generation. And yet the observed frequencies in the case of those doctors who were advised by parents were proportionately much larger than those observed in the case of engineers, showing that inspite of all these difficulties medicine as a profession had an edge over engineering. Such a trend in favour of medicine seems to be a legacy of the highly respected and reverred professions of 'Unani' and 'Vedic' systems of medicine practiced by the 'Hakims' and Veds'.

Slightly significant differences are found to exist between doctors and lawyers when they are advised to choose these professions by parents and relatives, showing that a larger proportion of parents advised medicine, whereas law as a profession to be adopted was advised by about an equal proportion of parents and other relatives (cf. Table 13). Engineering and law do not show any significant differences between themselves and about an equal number of parents and other relatives advised the younger generation to adopt these professions (cf. Table 15).

A comparison of teachers with doctors, engineers and lawyers shows that their exist highly significant chi square values differentiating teachers from all the other three groups (cf. Tables 14, 16 and 17). Medicine, as we have pointed out earlier, has an edge over engineering and law when advised by parents. Teaching, on the other hand, has been advised as a profession by a large number of relatives other than parents. This may be interpreted as indicating that the traditional high social prestige enjoyed

by teaching which used to be the preserve of the highest caste viz. the Brahmins had not yet loosened its grip on the thinking of the elders. Moreover, with the increasing importance of modern education more and more schools and colleges were being opened and restrictions on education were being greatly relaxed. And the government run schools and colleges had made teaching a fairly well paid job. Thus modern ideas regarding western education and the age old traditions in this field kept the teaching profession a highly prestige bearing one. It was, perhaps, a desire to get the position of the family elevated to that of the upper most class by making the sons of the family teachers of the community which might have cajoled many a guardian and relative to advise the younger generation to adopt teaching as a profession.

It seems that parents were much more involved in and ambitious about the careers of their offspring, whereas relatives exerted a moderating influence in advising teaching as a profession which enjoyed a high social prestige, guaranteed a fairly good monetary return and yet did not make extra-ordinary demands in terms of training requirements and practicing paraphernalia.

Item 4DEF - Service to caste, nation, society or humanity, i.e., Social and humanitarian considerations:

When we compare doctors and engineers for choosing their vocations on social and humanitarian grounds we find that there is no difference between the two (cf. Table 18). Studies like that of Threkeld (6) have reported a rather large percentage of doctors indicating "Service to Community as the reason of their occupational choice. Threkeld reported 51% of doctors

(included in his professional group) and only 17% of engineers choosing their occupations on the basis of this reason. Our findings differ from that of Thrlakald in so far as we have found about an equal number of doctors and engineers reporting service to society and nation as reasons for their choice. It may be pointed out that this finding might have been the result of including the item "service to caste" in this category. Moreover, during the thirties and the forties struggle for the independence of the country was at its highest pitch and it was a period of the upsurge of patriotic sentiments and nationalistic considerations. In such a social atmosphere a larger number of engineers, as well as any other groups, were likely to profess social and humanitarian considerations more often than in any other social environment as the basis of their occupational choice.

As far as doctors and lawyers are concerned it is found that the chi square value (cf. Table 19), although insignificant, is quite close to the point of significance. Social and humanitarian considerations influence the vocational choice of doctors and lawyers in about an even measure. The fo column, however, shows that comparatively a smaller proportion of lawyers has reported social and humanitarian grounds as the reason of its occupational choice. They seem to be influenced not by considerations of service to society or the nation but by the social prestige enjoyed and the monetary returns ensured by the profession of law.

Doctor-teacher and engineer-lawyer groups also record insignificant ch

square values, showing that there are no differences in the choice of occupations of the two groups as a result of social and humanitarian considerations. The fo column of table 20 shows a large proportion of teachers and a considerable proportion of doctors reporting social and humanitarian considerations as the basis of their occupational choices. Whereas, quite a fair proportion of engineers and lawyers (cf. Table 21) decided to choose their occupations for considerations other than social and humanitarian. The engineer-teacher and the lawyer-teacher groups (cf. Tables 22 and 23) show significant differences in their occupational choices as a result of social and humanitarian considerations. A very large proportion of teachers, in both the cases, reporting this factor as the basis of their choice. When we consider all the chi square values on this item it becomes clear that teachers as a group are more in favour of choosing their profession on the basis of social and humanitarian considerations. The traditional importance and value of teaching as a profession as well as the considerations of service to the caste and the nation in making them enlightened by imparting education is an aim on which there can be no two opinions.

It seems appropriate that items 4 JNO (considerations of power, authority and independence) 4 KQ (monetary considerations) and 4 DEF (social and humanitarian considerations) should be taken up together so that we may be able to present a more meaningful analysis of these items. Considerations of power and authority, concern for humanity and monetary considerations present certain value systems which when compared with each other may throw light on the dynamics of the occupational choice making process.

A glance over to the chi square values and observed frequency distributions of various tables (cf. Tables 18 to 29 and 54 to 59) shows that there are differences between engineers and teachers and between lawyers and teachers. Teachers, in comparison to both engineers and lawyers, show that all the three value systems viz. social and humanitarian considerations, considerations of power and authority and monetary considerations were simultaneously exerting a determining influence in favour of teaching as their occupational choice; Doctors and engineers, doctors and lawyers, doctors and teachers and engineers and lawyers do not show any differences as to the value orientations of their vocational choice, particularly, on the basis of monetary, social and humanitarian or power and authority considerations.

Legal profession during the thirties of this century was, perhaps, the greatest money-spinner among the professions. Along with being a highly lucrative profession, it gathered considerable prestige and charm because of the incident that many national leaders were practicing lawyers. Leaders like Mahatma Gandhi, Pandit Motilal Nehru, Bhola Bhai Desai, Sir Tej Bahadur Sapru and Pandit Jawahar Lal Nehru and others were lawyers who attained great eminence in Indian national life and wielded power and authority, over the masses, unimagined and unheared of except in the case of Rajas and Maharajas of the past. All these values, therefore, we find mirrored in the fo columns of tables23, 29 and 59 which show that about an equal number of lawyers chose their profession for considerations of service to the nation and society, for reasons of gaining power and authority as well

as for earning more money. Rosenberg(7) in his study of occupations and values shows that 71% of his money oriented subjects regarded power and authority as an important value orientation in achieving their monetary goals. Conversely, it holds good that those with social and humanitarian value orientations do not place very much emphasis on monetary rewards from their work. The same study further points out that those holding social and humanitarian values appear to be inspired by the psychologically satisfying results of the work itself.

Lawyers among themselves are distributed about equally in all these three value orientations, showing that, although, all the three orientations are present in some measure there is no preponderance of any among the lawyers as a group. A slightly larger proportion of them adopted law as a profession for considerations of money, which seems to go along with considerations of power and authority/(8). Service to society and the nation, i.e., social and humanitarian consideration reported by lawyers is, perhaps, a result of the halo effect of great national leaders of the time. It seems that on the whole lawyers were not particular in making their occupational choice on the basis of any of the value orientations discussed here, but indicated these values as a result of being impressed by the various facets of the life of eminent national leaders who happened to be lawyers by profession.

as reported by Rosenberg

As against this, we find that a much greater proportion of teachers has shown the presence of all these three values which differentiates them from lawyers as a group. A simultaneous preponderance of all the three values

among teachers may be explained by referring to the fact that teaching had traditionally been a prestige bearing profession in India, the 'Guru' had always commanded great respect from the community because of his being benevolent and kind to others, and exercised unquestioned authority over his pupils. During the early period of the spread of western education, teachers assumed the role of the benefactors of the nation. And though, mundane rewards were not the want of teachers of the past, modern education, in addition to the privileges of the "Guru", rendered the profession a lucrative one.

Engineers and teachers differ in making their occupational choice when it is based on considerations of monetary return and social and humanitarian considerations, the proportion of teachers being much larger than that of engineers (cf. Tables 22 and 58), whereas in the case of considerations regarding power and authority there are no differences in their choice, but fo column (cf. Table 28) shows that relatively larger proportions of both engineers and teachers advance this consideration as the reason of their choice.

Doctors when compared with engineers, lawyers and teachers do not show any differences in their occupational choice when it is based on considerations of monetary return, social and humanitarian considerations and considerations regarding power and authority. In all cases (cf tables 18, 20, 24, 26 and 54 to 56) all the groups show slightly larger proportions making their choice on the basis of all these three considerations except in the case of lawyers, a slightly larger proportion of whom reports that

social and humanitarian and power and authority considerations (cf. Tables 19 and 25) were not the reasons determining their occupational choice.

Item 4 CLMV - Considerations regarding one's own suitability, experience, interests and abilities.

Chi square values obtained for doctors and engineers, doctors and lawyers, doctors and teachers, and engineers and lawyers are insignificant showing that all these groups were about equally guided or not guided by considerations of suitability, experience, interests and abilities in choosing their vocations (cf. Tables 30 to 33). Engineers and teachers, and lawyers and teachers, on the other hand, show significant differences between themselves when they choose their occupations on the basis of these considerations, a much larger proportion of teachers giving these reasons as the basis of their occupational choice (cf. tables 34 and 35).

Many studies have reported "liking","experience", "interest", "ability" and "suitability" for the job being the reasons for occupational choice. Bedford(9), for example, found that questions regarding the background of occupational choices were invariably replied to in such terms as "I am interested in it", or "I like that kind of work", and concludes that very few had given any thing like serious thought to the problem of occupational choice. He thinks that choices, more often than not, are determined by prejudice, sentiment and tradition. Super(10) reports that choice is attributed to "interest" when the subject fails to think of any better response.

In the light of these studies when we analyse the differences between engineers and teachers and lawyers and teachers it becomes obvious that both engineers and lawyers (perhaps doctors also, in whose case Yate's correction was applied, and whose sample is the smallest, otherwise we would have recorded significant differences between doctors and teachers also) had a more clear idea about their occupational choice and were surer of their aims and goals. A large proportion of teachers, on the other hand, reports "interest", "ability" etc. as the reason for its choice showing that it does not have any other and better reasons as the basis of its choice(11). It seems that those pursuing higher studies at the Master's level never knew whether they will be able to become college teachers, petty officials or simply office clerks. Engineers and lawyers (and doctors as well) had been surer of their place and profession from an earlier period when they might have decided upon the specialized courses of their study; these groups could always give a more concrete answer as to their occupational choice and more concrete reasons underlying it.

Item 4 AB - Identification with people engaged in the same profession.

Item 4GHIT - Pressures or advice of other persons.

Both these items are being taken up together as they are concerned with the influence of other persons in one's environments, whether these influences are internalized through the process of identification or are imposed in the form of advices or pressures.

The chi square values regarding both the items for all the groups are insignificant (cf. tables 36 to 47), showing that there are no differences between the various groups regarding their choice as a result of identifications with people and pressures of other persons. The fo columns in the chi square tables show larger proportions of all groups invariably giving negative replies on both of these items (except doctors who on item 4 AB show a majority of one) indicating that their occupational choices were neither based on identifications with people nor on the pressures exerted by other persons.

Berdie(12) regards these factors as interesting and points out that the occupations of the most admired acquaintances had no relation with the occupational choice of the subjects. Korner(13) while talking of the unrealistic ambitions which may play a part in the choice of an occupation points out that on occasions, individuals accept the vocational choices of friends with whom they closely identify themselves. Our results, however, are in confirmity with the findings of Berdie as far as inter-group comparisons are concerned.

Item - 4 RSU - Environmental pressures such as economic factors, family circumstances and lack of openings.

Doctors and engineers do not show any differences in their occupational choices on the basis of environmental pressures(cf. table 48). A glance at the fo column of the chi square table shows that a vast majority of both the doctors and the engineers reported the absence of environmental pressures in determining their choices. People entering medicine or engineering

usually belong to well to do upper or upper-middle class families and both these professions require fairly long and expensive training. These considerations discourage those who have stringent financial means or strained family circumstances to enter these professions. Lack of openings were obviously non-existent in the case of both these professions, hence an overwhelming majority of both doctors and engineers were not influenced by these factors and do not show any differences.

Environmental pressures play a significant role in differentiating doctors from lawyers in their choices of occupation (cf. table 49). Here lawyers do not show any overwhelming trend in favour or against environmental pressures in determining their occupational choice, whereas a large proportion of doctors shows that environmental pressures did not play any significant role in determining their occupational choice, hence the difference. Presuming that all those desirous of joining these two professions came from almost the same socio-economic background, lack of openings in a crowded profession like law may account for an even distribution of lawyers in reporting the absence or presence of environmental pressures in determining their occupational choice.

Although doctors and teachers do not differ in their occupational choices as a result of environmental pressures (cf. table 50), the fo columns of the chi square table shows that a larger proportion of doctors than that of teachers reports the absence of environmental pressures in determining its occupational choice. It may be pointed out, that the smaller frequencies in the case of doctors being less than ten, Yate's

correction was applied as a result of which chi square value was rendered insignificant.

Engineers and lawyers differ in the choice of their occupations on the basis of environmental pressures (cf. table 51). The fo column of the chi square table shows a singular lack of environmental pressures in the case of engineers. In explaining this observation we may advance the same reasons as we did while comparing engineers with doctors on this very item. Lawyers, as we have already alluded, may perhaps be distributing themselves rather evenly as a result of the inclusion of "lack of openings" / in other professions, as a factor under this item.

Chi square value becomes markedly significant in the case of a comparison of engineers and teachers (cf. table 52). Although the fo column of the chi square table shows that a good proportion of teachers exhibits a lack of environmental pressures in choosing the occupation, but the proportion of engineers giving negative replies is much higher than that of teachers, hence the marked differences. In the case of teaching also, it may be said, "lack of openings"/ in other professions seems to be responsible for showing comparatively higher proportion of the presence of environmental pressures. It might also have been possible that persons of relatively lower socio-economic status were attracted towards teaching as a profession.

Lawyers and teachers do not differ in their occupational choice on the basis of environmental pressures (cf. table 53). For, both, law and teaching there were no sure openings, hence, the insignificance of chi square value showing no difference in the occupational choice of lawyers and

teachers as a result of environmental pressures.

Item 5 - Traditional profession of the family.

Item 'A', the purpose of which was to determine the influence of father's occupation differs from item 5 in so far as the latter includes the professions of the grandfather and uncles etc. as well as the profession of father. In other words, the traditional profession of the family refers to a profession when it is followed by one or more generations in the family.

The results arrived at by the application of the chi square clearly show that the traditional profession of the family does not differentiate doctors and engineers, doctors and lawyers, doctors and teachers, and engineers and teachers in the choice of their occupations (cf. tables 60 to 64).

Engineers and lawyers and lawyers and teachers, on the other hand, differ in their occupational choice when it is made on the basis of the traditional profession of the family (cf. tables 63 and 65). The fo columns of engineers in the chi square tables 63 and 65 show that a great majority of engineers was not guided by the traditional profession of the family or, to put it differently, engineering was not their family profession. Engineering as a profession has acquired importance and currency only recently and some thirty or forty years ago when our subjects had to choose their professions there were not many, or even any considerable number of, engineers so that engineering as a profession could be a family

tradition. Law and, to a certain extent, teaching were traditional family professions of the upper and upper-middle classes is also apparent from the findings, yet a larger proportion of teachers gave a negative reply hence the significance of the result.

Items 10,12,13 and 14 may be treated simultaneously as these questions provide a measure of the fulfilment of expectations from the job and, therefore, one's own satisfaction. A person who thinks that he would have earned more money in some other profession, clearly shows that his expectations have not been fulfilled in his job. Another indirect measure of satisfaction or dissatisfaction with the job is whether the reward(monetary or concrete) an individual is getting from his job are or are not sufficient for him to meet his obligations towards his family. And finally, the fact that one would or would not like his children to enter into his own profession provides another measure of satisfaction with one's job.

Doctors and engineers do not differ in so far as satisfaction with the job in terms of monetary rewards is concerned (cf. table 66), fo columns of the chi square table shows that both the doctors and the engineers are more or less satisfied with their jobs may be inferred from the finding that both these groups by and large feel that they would not have earned more money in any profession other than their own. This inference is further substantiated by a similarity of their answers to the direct question whether they are satisfied with their job (cf.table 72). This perhaps is an indication of the fact that there is a close relationship between the satisfaction on the job and certain considerations on the basis of which the choice of the occupation might have been made, i.e., doctors and engineers were not led to choose their profession on the basis of such

factors as that of family tradition or the profession of the father etc., but were mainly led to make their choice on the basis of more rational factors such as monetary returns and social and humanitarian considerations etc.

Comparing the replies of doctors and engineers on items 13 and 14 we find that, although, a majority of engineers answered item 13 in the negative, yet a vast majority of them wants that their sons should enter the same profession as they are engaged in. When this is compared with the replies of doctors who said that their income is sufficient for the education of their children, and, also, that they want their sons to enter the same profession as they are engaged in, the doubtful value of the replies of engineers to item 13 becomes apparent. Here, again, however, the chi square value is rendered insignificant because the overwhelming majorities of both groups require their sons to step in their own professional shoes (cf. table 84).

By way of explanation it may be preferred that in the case of engineers the negative replies to item 13 had an edge over the positive ones. As this was a question bearing upon the real incomes of the groups, we find that doctors were straight-forward in their replies. Engineers, whose actual pay is usually not very high but whose real incomes in many cases may be very high, seem to be reluctant to give an affirmative reply to this question, perhaps, as a precaution against disclosing their real incomes (cf. table 78). In fairness to the engineers an alternative explanation may be that, perhaps, they misconstrued the word 'income' in item 13 as 'pay' and, therefore, replied in the negative. But the fact that no other group misconstrued this item renders the alternative explanation highly improbable.

A comparison of doctors and lawyers shows that these two groups differ in their satisfaction with job in fulfilling monetary expectations (cf. table 67). The fo column of the chi square table shows that a majority of doctors thinks that they would not have earned more money in any other profession than their own, whereas a majority of lawyers reports that they would have, which indicates a lack of satisfaction with monetary rewards in the case of lawyers. But when we come to item 12 we find that about an even proportion of the two groups gives replies in affirmative to the direct question "Are you fully satisfied with your present profession?" However, here also, we find that a majority of doctors replies in the affirmative and a majority of the lawyers replies in the negative, although the chi square value remains insignificant (cf. table 73).

On item 13 a vast majority of doctors replies that their income is sufficient for the education of their children. Whereas, lawyers, here, are distributed about evenly. The chi square value is rendered insignificant as a result of applying the Yate's correction (cf. table 79).

Coming to item 14 we find that a significant chi square value is obtained (cf. table 85). This result shows that doctors and lawyers differ in so far as they want or do not want their sons to enter the same professions as they are engaged in. We find that a majority of doctors wants their sons, whereas a vast majority of lawyers does not want their sons to join their profession. This clearly shows that although about half the number of lawyers reports that their income is sufficient for the education of their children and that they are satisfied with their profession, yet they do not want their children to enter it, whereas doctors seem to be

more consistent regarding all these questions.

It is apparent that lawyers while thinking about their profession in terms of its future prospects for their own sons tend to take cognisance of the dwindling social value and the diminishing monetary returns of a profession which was at one time the best profession in all respects. Today we find the legal profession badly over-crowded and damaged in prestige; medicine, on the other hand, still remains on the peak of social hierarchy and pays fairly good monetary rewards even if one is able to reach only the average level of success in this profession.

When we compare doctors and teachers we find that a large majority of teachers feels that it would have earned much more money in some profession other than their own (cf. table 68). It seems that the expectations of rewards with which they entered this profession were not fulfilled and along with that failure the prestige of the profession and social considerations which had prompted these persons to enter this profession no more hold the same glamour and charm as they used to possess in the past. Evidence regarding such a conclusion becomes stronger as we proceed ahead with other related questions.

To the direct question of satisfaction with the job we find that 'yes' seems to be the stock answer of all the groups, although, when checked against other criteria of satisfaction, e.g., items 10, 13 and 14 the significance of this reply gets very much reduced (cf. table 74). It may, however, be pointed out that job satisfaction has many aspects and one

may be satisfied with one aspect of a job while at the same time be dissatisfied with another aspect of it. Moreover, the questions asked, here, about job satisfaction are not exhaustive, it requires a separate study which may be undertaken by some future investigators.

With regard to the question whether their income is sufficient for the education of their children or not we find that a vast majority of doctors says 'yes' and a majority of teachers answers 'no'. The observed frequencies, in the case of doctors being less than ten Yate's correction was applied which rendered the chi square value insignificant, although it remained as high as 3.559 (cf. table 80).

When asked whether they like to see their children enter the same profession as they are engaged in, an overwhelming majority of teachers replied 'No', whereas a large majority of doctors said 'Yes', rendering the chi square value highly significant (cf. table 86).

Replies to this question, which to the investigator seems to be an important one, clearly establish that doctors as compared to teachers are much more satisfied with their jobs. The idealism of teachers, with which they entered this profession, seems to have waned as a result of the lack of material rewards in this profession.

As far as the engineer-lawyer group is concerned the chi square values show that they do not differ from each other on three of the four

items, but do differ on item 14 where the chi square value is significant.

On item 10 although the chi square value is insignificant (cf. table 69) the fo column shows that a larger number of engineers thinks that it would not have earned more money in any other profession and a larger number of lawyers thinks that it would have. This shows that lawyers as compared to engineers are less satisfied with the monetary returns of their profession. On item 12, the direct question regarding satisfaction with the job, we find that both groups are about evenly distributed rendering the chi square value insignificant (cf. table 75).

Replies, of both engineers and lawyers, to item 13 are about evenly distributed and the two groups do not show any difference in expressing their satisfaction or dissatisfaction with their income, as far as the education of their children is concerned. The chi square value is an insignificant one (cf. table 81). Let us consider this result along with the result concerning item 14, where we find a highly significant chi square value (cf. table 87). Although engineers are evenly distributed as far as the sufficiency of their income for the education of their children is concerned, yet when asked to indicate whether they want their children to follow the same profession as they are engaged in a majority of them replied 'Yes'. This means that they are reluctant to express satisfaction with their incomes, although they might actually be satisfied with it and therefore, they want their

sons to enter their own profession.

Although lawyers, also are evenly distributed as far as the sufficiency of their income for the education of their children is concerned, but a vast majority of them does not want their children to enter the legal profession, perhaps, because the profession has now lost its social prestige and the halo it once had around itself while there is not much scope for material rewards either.

A comparison of engineers and teachers repeats almost the same pattern as that of engineers and lawyers.

On item 10 we find significant differences between engineers and teachers in saying that they would have earned more money in some other profession than the one they are engaged in. The fo column of the chi square table shows that the replies of a vast majority of teachers are in the affirmative and a majority of engineers gives a negative reply to this item (cf. table 70). This shows that teaching as a profession has failed to fulfil the expectations of those who entered it in so far as monetary rewards are concerned.

On item 12, the direct question on satisfaction with the job, the same pattern repeats itself for engineers and teachers as it does with all other groups, i.e., an even distribution of the two groups rendering the chi square value insignificant (cf. table 76).

Regarding sufficiency of income for the education of children we find that a small majority of both engineers and teachers reports that it is not (cf table 82). When we consider item 14, we find that a majority of engineers wants that their children should adopt engineering as a profession, whereas, a large majority of teachers does not want their children to enter teaching as a profession (cf. table 88). Here, also, it seems that teaching as a profession is loosing in social prestige and fails to provide adequate monetary rewards.

Coming to a comparison of lawyers and teachers we find that there is a similarity in their replies to some of the questions regarding satisfaction with the job and fulfilment of expectations from the job. We have compared both these groups separately with other groups and have put forward social-psychological explanations regarding the tendencies discerned in their replies. Comparisons of lawyers and teachers on all items give insignificant chi square values (cf. tables 71, 77, 83 and 89).

Item 16 - Influence of childhood mock-roles or early job identifications.

Item 19 - Favourite vocations during childhood and adolescence.

Both these items are related to each other in so far as early occupational influences are a factor in the choice of a vocation. Mock-roles played during childhood are either the result of identifications with certain people in one's environment who are recognized important by others because of the importance and social prestige of the vocations they happen to follow, e.g., doctors, teachers, etc., or the direct result

of the recognition and importance of certain vocations by society irrespective of the fact whether any person in one's immediate environment was following these vocations or not e.g., judge, soldier, etc. While playing these roles the individual does not, at least consciously, think of adopting these as his life career. Whereas the expression "favourite vocations" refers to those occupations which one prefers over other vocations and has, consciously, thought of adopting for himself as a profession.

The childhood of the subjects in our sample seems to have been spent during the late twenties or early thirties of this century, and mock-roles or favourite vocations of these persons may, therefore, be in accordance with the 'fashionable' professions and the social atmosphere of their time. Menger (14) has pointed out that engineering was the most popular choice of her sample at the high school level and physician won the highest place at the college level. These choices in the America of the thirties, indicate the important role played by the social atmosphere of the time when a preference is expressed or an occupational choice is made.

Mock-roles played by children reflect the environmental influences of the family, the school and the neighbourhood regarding occupational considerations. The family, the school and the neighbourhood environments in their own turn are determined by the prevalent social-occupational atmosphere of the society as a whole. When we consider our data, along with these observations, we find that doctors and engineers of our sample show

that there is no difference between them in making their occupational choices as far as childhood mock-roles play a part in shaping these choices (cf. table 90). The fo column of the chi square table shows that a vast majority of both doctors and engineers was not influenced, by the mock-roles played during childhood, in making occupational choices in later life.

Engineering was a little known profession during the early thirties and there was no social prestige attached to or importance realized of this profession in our country during the first quarter of this century. Medicine was better known and more respected, but, was not a very common profession and was the privilege of a chosen few.

This holds good, also, for the favourite vocations of our subjects during their childhood or adolescence. A vast majority of both doctors and engineers, here again, shows that it was not influenced by its favourite vocations of childhood and adolescence in making its occupational choices in later life (cf. table 108).

The doctor-lawyer comparison shows differences between doctors and lawyers as far as early job identification or mock-roles are concerned but none as far as favourite vocations of childhood and adolescence are concerned (cf. tables 91 and 109). A very small proportion of doctors' ultimate choices agreed with the mock-roles they used to play during their childhood, and lawyers were rather evenly distributed on this item. By the time our subjects attained adolescence a shift against law as a

favourite vocation took place among the lawyers, rendering the chi square value insignificant.

The doctor-teacher comparison shows that early job identifications do not differentiate doctors from teachers in their occupational choices, both the groups giving a large number of negative replies on this item (cf. table 92). But at an advanced stage, i.e., during adolescence a differentiation is discernible between doctors and teachers regarding their favourite vocation (cf. table 110). Here, although, the favourite vocation of the doctors in a majority of cases is not in agreement with their final choice, teachers are evenly distributed in this regard.

Engineers and lawyers show about the same trend as do doctors and lawyers. Here we find that lawyers differ markedly from engineers in so far as early job identifications play or do not play a part in the final choice of their occupations (cf. table 93). But, when we come to item 19, that is, how far the favourite vocation of childhood or adolescence played a part in this choice we find that a shift against law being a favourite profession takes place among the lawyers of our sample and the chi square value is rendered insignificant (cf. table 111).

A comparison of engineers and teachers shows no significant differences between them; a majority of both engineers and teachers shows no influence of the mock-roles, played during childhood, on its occupational choice (cf. table 94). By the time these groups move towards adolescence we find that teaching starts gaining its adherents among those

who finally adopted teaching as a profession, giving a markedly significant chi square value (cf. table 112). It appears that by the time boys start going to school teachers' influence becomes strong and conspicuous in their occupational thinking.

Lawyers and teachers show significant differences between themselves both in the early job identifications and favourite vocations of childhood and adolescence with their final choice (cf. tables 95 and 113). Here we find to columns of the chi square tables revealing markedly significant differences of direction regarding item 16 and 19. As far as lawyers are concerned it seems that early job identifications or mock-roles they played during childhood exerted a more determining influence on their final vocational choice, whereas in the case of teachers the favourite vocation of childhood and adolescence played a more decisive role in the final choice of their occupation.

Item 17 - Awareness to earn a living.

Item 17 relates to the stage (school or college) at which boys become aware of earning a livelihood. Except in the case of the comparisons of engineers and lawyers and engineers and teachers the chi square values arrived at in this investigation are found to be insignificant (cf. tables 96 to 98 and 101). This shows that a vast majority of doctors, lawyers and teachers were not aware of earning a living at the school level, at the college level a majority of all groups shows an awareness of earning a livelihood.

Chi square values are found to be just significant in the case of a comparison of engineers and lawyers and engineers and teachers, in these cases we find that a slightly larger proportion of engineers as compared to the proportions of lawyers and teachers, becomes aware of earning a livelihood at the school level (cf tables 99 and 100).

One of the explanations of this trend among the engineers may be found in the early decision which is usually taken regarding entry into a technical line so that preparation in the form of coaching for science, mathematics, etc. gets started rather early in the educational career of the boy. This sort of occupational orientation from the beginning makes boys occupation conscious. And from occupational consciousness, the awareness to earn a living is only a short step forward.

It may, also, be that those with a higher socio-economic background may not become aware of earning a livelihood at an early stage, whereas circumstances of those with lower socio-economic background may force on them the awareness of earning a living at a very early stage. But it seems improbable in the case of our engineer subjects, because those preparing for a vocation as time consuming and expensive as engineering, usually come from well to do families.

Almost all the subjects of this study belong to middle class joint families with feudal or zamindari background. The customs and organization of joint families, particularly, those with a feudal background made their members dependent on the family coffers. The every day needs and requirements of the family members were looked after by the family, and during

the early stages of life earning a livelihood seemed to be a problem non-existent for them.

Item 18 - Decision to enter a profession.

When we consider the time or the educational level at which the decision to enter a profession is taken we find no differences between any of the pairs of groups in our sample and chi square values in all cases are found to be insignificant (cf. tables 102 to 107).

Looking to fo columns of chi square tables we find that a large majority of all groups takes a decision at the college level. Lack of occupational decision at the school level may be atributed to many factors as Spencer(15) has pointed out. Some of the factors responsible for indecision are, a secure financial position rendering employment a triviality, lack of emotional and mental maturation, inability to analyze one's own abilities, ignorance of employment opportunities, absence of occupational interests, pursuit of a curriculum which lacks vocational orientation. Many of these factors seem to be present in young school boys of our country, and therefore, it is much too much to expect that many of them would have taken an occupational decision while still at school.

Specialization although present in the form of arts or science groups at the school level gets clearer, occupationally speaking, at the college level alone. A potential physician or engineer commits

himself clearly and irrevocably to his future occupation at the college level when he decides, for example, to choose the mathematics or the biology group. This helps him crystelize his occupational choice and vocational future. In the case of law and teaching, specialization starts at the post-graduate level. A potential lawyer or teacher cannot be sure of his future vocation even at the college level. It,is, therefore not easy for him to make a definite occupational decision at the school level. By the time he reaches college he is able to build up a clearer occupational perspective and hence more likely to take a decision in this regard.

These results are similar to the findings of Threlkeld(16). To his query "Since what year in school have you consciously make a vocational choice or preference?" 65% replied college and only 30% indicated high school. Neuberg's(17) results have, also, been similar in that he found that 72% of the male freshmen had made vocational decisions at the college level. It may, however, be true as Sparling(18) has pointed out that no proper age can be established for making a vocational choice, and it is the knowledge and maturity of the individual which directs him towards making a definite vocational decision.

Item 20 - Occupational choice after high school.

Coming to item 20 we find that there are no differences between any of the groups in taking a vocational decision after high school except in the case of doctors and engineers and doctors and teachers, the chi

square values in these two cases being just significant (cf. tables 114 and 116). In all other cases chi square values are insignificant (cf. tables 115 and 117 to 119). In all these cases a larger proportion reports that not even a tentative decision was taken to join a vocation immediately after high school.

Doctors and engineers usually have to decide immediately after high school, as to whether they shall take up the medical group courses, i.e., biology as an option with other subjects or the engineering courses i.e., mathematics with other courses. It seems that the choice of biology being different from the choice of subject studied upto the high school level where mathematics was compulsory for all students, the boys taking up biology become conscious of the choice of their college courses and develop a perspective regarding their vocational future. This deliberate selection of a subject of study facilitates the expression of a vocational choice. Engineering group students taking up mathematics do not become conspicuous and hence less expressive in so far as any definite vocational decision is concerned. In the case of teachers no specialization at early college stage is required and therefore, choice of optional subjects does not make them conscious about any future vocation. A larger proportion of doctors as compared to engineers and teachers makes an occupational choice after high school. All other groups remain about the same as in the case of item 18 and the analysis presented in those cases holds good here also.

Item 22 - Teacher's influence.

Influence of teacher, particularly in the absence of any vocational guidance on scientific lines seems to be important in shaping the vocational decisions of students at school and college levels. Some of the American investigators like Threkeld(19) and Berdie(20) have emphasized the importance of teachers' role in the occupational choice of the taught. In our country the importance of teachers in this respect gets increased manifold. Many of the parents themselves are guided by the advice of the teacher. From the young student's point of view the teacher becomes all the more important because he is not only a friend, a philosopher and a guide, but also a personality which is an embodiment of all that is good, desirable and ideal in the society. It is because of this image of the teacher that the student is inclined to identify himself with the teacher, when the latter either enjoys a reputation of being a good teacher or has been teaching a particular subject which the student likes.

Considering our findings in this light we see that all the groups are impressed by their teachers. Although the groups of doctors, engineers and lawyers are less frequently influenced by their teachers than the group of those who are themselves engaged in teaching, i.e., those who are themselves teacher by profession. No differences were found to exist between doctors and engineers and the chi square value obtained is insignificant, but when we look to the fo column (of table 120) we find that both doctors and engineers are impressed by their teachers, the direction of their preponderance being the same the chi square value is rendered insignificant. This holds good for the doctor-lawyer, doctor-

teacher and engineer-lawyer comparisons also (cf. tables 121 to 123).

The engineer-teacher and the lawyer-teacher groups show marked differences between themselves regarding the influence of their teachers in moulding or shaping their occupational choices (cf. tables 124 and 125). Being impressed by teachers becomes a highly significant factor in the occupational choice of those who adopted teaching as a profession. Although in the case of other groups also the influence of the teacher is discernible as a factor in choosing a vocation, it is much more prominently present in the case of the teacher group of our sample.

Item 25 - School subjects and present profession.
Item 26 - College subjects and present profession.

Chi square values for all the groups on both the items are found to be insignificant. Both at the school and the college levels a vast majority shows agreement between the courses of study and the occupation actually adopted. At the school level, appropriate science group courses were taken to be in agreement with the occupation in the case of doctors and engineers. Those who studied science subjects at the school or college level, but were later engaged in the profession of law have been treated as cases of disagreement between the subject studied and the profession ultimately adopted. Whereas in the case of teachers, those who did not study, at the school or college (undergraduate) level, the subject or the subjects related to the one they themselves are teaching, were taken to be the dissenters (cf. tables 126 to 137).

Even today, no educational or vocational guidance is provided to a vast majority of students on scientific lines, with the result that we have found such glaring cases of patent failures in science subjects that they could not pull on with science as a subject of study at the post-graduate level and had to switch over to, for example, law as a profession and strangely or realistically enough proved successful as lawyers. The number of such cases in this study is very small. However, it seems to be an interesting side study, if taken separately.

Item 32 - Information regarding requirements of the job.

There is no difference between doctors and engineers or any other pair of groups of this study in so far as any knowledge or lack of knowledge regarding the requirements of their jobs is concerned. All chi square values obtained are found to be insignificant, showing that all groups are about evenly distributed on this item (cf. tables 138 to 143).

These findings, when seen in the light of our findings on other items such as considerations of suitability, abilities, interests and experience, etc., corroborate Bedford's(21) conclusion that "Apparently the less the student knows about the actual requirements of the occupation, the firmer his belief in his personal fitness for the work." Many other investigators have come to the conclusion that knowledge of the world of work is usually sadly lacking among the prospective candidates for an occupation

II. Item-wise comparison within each separate group:

In the case of item-wise comparisons within each group all the three statistical tests viz. chi square, binomial and critical ratio were employed. The analyses of the data obtained are mainly based on the one and two sample chi square tests, as has already been pointed out. The other two tests have been employed (1) to provide independent evidence of possible relationships, and particularly (2) to provide checks against the findings of the other tests employed. Analysis, in this section shall also, therefore, be mainly based on the results of the chi square test; the results of the other two tests shall be mentioned and their relevance shall be pointed out in the course of the main analysis, through out this section.

DOCTORS:

Item 'A' - Influence of father's occupation.

Item 'A' refers to father's occupation. An analysis of this item shows the indirect part played by the father's occupation in the choice of a son's profession. The chi square value 14.440 in table 153 is highly significant. Although there is a large discrepancy in observed frequency values, but there is none in the difference of the observed and the expected frequencies as a result of the application of Yate's correction. However, the observed frequencies show that the high significant value of the chi square is in a negative direction. In other words, a large number of doctors did not choose the same occupation as that of their fathers'. The

explanations put forward in the case of inter-group comparison to explain the insignificant chi square value of the Doctor-Engineer group hold good in this case also, as the significance here is in a negative direction.

For the purpose of the analysis of the same data in terms of Binomial test null hypotheses were formulated and tested for every item in the case of each one of the groups. The Ho formulated for testing this item was "There is no difference between those who are influenced by their father's occupation in making their own occupational choice and those who are not influenced by their father's occupation in making their own occupational choice." This Ho was rejected. Rejection of the null hypothesis in this case means that their is difference between the two categories of the subjects, i.e., those who were and those who were not influenced in their occupational choice by the occupation of their fathers. The smaller frequency (x) in table 144 refers to the number of subjects who were influenced by their fathers' occupation in making their own occupational choice, and this frequency is as small as three. Hence, the rejection of this hypothesis shows that a very large number of doctors were not influenced by the occupation of their fathers' in making their own occupational choice. And this is a finding which is in line with the negatively high significance of the chi square value on this item for the group of doctors.

Coming to the third test viz. Critical Ratio we find that like the chi square the critical ratio is also highly significant. Table 153 shows that it (critical ratio) is 3.8. The value of chi square for this item in table 153 is 14.440, which is highly significant in a negative direction.

The two tests lead to the same inference. "When there is 1 degree of freedom in a contingency table, chi square is equal to t^2, or t is equal to chi, the square root of chi square". Guilford (22). The values of chi square and t being 14.440 and 3.8 respectively (table 153), chi square is exactly equal to t^2.

Thus, the analysis, here, shows that all the three tests applied lead to the same results and each one corroborates the findings of the other two.

Item 3 - Advice of parents and others.

Item '3' refers to the advice of parents and other relations to their sons or relatives to adopt a particular profession irrespective of their own (elders') occupation. Refering to table 153 we find that the chi square value 6.760 is highly significant, showing that there is difference between those who chose their occupation as a result of parental advice and those who chose it on the advice of relatives other than parents. A significantly large number of doctors was advised by their parents to adopt medicine as a profession as compared to those who were advised by their relatives to enter this profession.

In the case of the application of Binomial test on the same data we find that the Ho has been rejected showing that there is difference between those doctors who chose their occupation on the basis of parental advice and those who did so as a result of the advise of relatives other than parents. Table 153 shows that C.R. being 2.8 is highly significant

like the value of the chi square which is 6.760. The analysis put forward for doctors in the case of inter-group comparisons holds good here also.

Table - 153

Consolidated results of the chi square, C.R. and Binomial tests applied on the data obtained from Doctor's group.

Item	Chi square value in Table I	C.R. in Table 149	Decision on Ho in Table 144
A	14.440**	3.8**	Rejected
3	6.760**	2.8**	Rejected
4DEF	1.000	1.0	Accepted
4JNO	0.360	0.6	Accepted
4c/mv	1.960	1.4	Accepted
4AB	0.040	0.2	Accepted
4GHIT	1.000	1.0	Accepted
4RS4	9.000**	3.0**	Rejected
4KQ	1.000	1.0	Accepted
5	9.000**	3.0**	Rejected
10	1.960	1.4	Accepted
12	0.360	0.6	Accepted
13	1.960	1.4	Accepted
14	3.240	1.8	Accepted
16	9.000**	3.0**	Rejected
17	6.760**	2.6**	Rejected
18	4.840*	2.2**	Rejected
19	6.760**	2.6**	Rejected
20	0.040	0.2	Accepted
22	4.840*	2.2**	Rejected
25	4.840*	2.2**	Rejected
26	9.000**	3.0**	Rejected
32	1.960	1.4	Accepted

Item 4RSU refers to environmental pressures such as economic factors, family circumstances and lack of openings. These considerations did not influence the choice of occupation of doctors as a vast majority reported that it did not choose medical profession on a result of extraneous or environmental pressures. We arrived at the same findings while analysing

the data in the case of inter-group comparisons, the same analysis holds good here also. The Ho stands rejected and the chi square and C.R. values are highly significant (table 153).

Item '5' refers to the traditional profession of the family. On this item, again, we find that there is a difference between those who were influenced by the traditional profession of the family and those who were not. A large proportion of the Doctors group reports that it was not influenced by the traditional profession of the family in choosing its profession resulting into the rejection of the Ho and rendering the values of chi square and C.R. significant (table 153). This finding is also in line with the earlier finding and the analysis of the inter-group data.

Items 16 and 19 refer to early job identifications and childhood vocations respectively. On both these items the chi square and the C.R. values are significant and Ho has been rejected. A large proportion of Doctors did not choose its profession on the basis of early job identification or the occupational mock-roles they played and on the basis of their favourite vocation of child-hood. This difference between those who were and those who were not influenced in choosing their vocations on the basis of early job identifications and childhood vocations is significant as shown by the result of all the three statistical tests applied in this case (table 153). The analysis proferred in the case of inter-group comparison holds good here also.

Items 17 and 18 refer to the time when an individual becomes aware of the need of earning a livlihood and the time when he takes a decision to enter a

profession, respectively. On both these questions it is found that there is difference between those subjects who became aware of the need of earning a livlihood at the school or college level and those who did not, as well as, between those who made a decision to enter a profession while they were in school or college and those who did not make such a decision. A large majority of doctors became aware of the need of earning a livelihood at the college level only and also decided to enter a profession only at the college level. The chi square and the C.R. values are significant and the Ho has been rejected (table 153) on both the items, i.e., 17 and 18. The explanation offered in the case of inter-group comparison for this trend hold goods in this case also.

Item 22 refers to the indirect influence of teachers in the occupational choice of the taught. We find that the chi square and CR values are significant and the Ho stands rejected (table 153). This finding shows that a large number of doctors was influenced by their teachers in the choice of medicine as a profession. This finding is in line with the findings and analysis of the inter-group comparison.

Items25 and 26 refer to the agreement or disagreement between school and college subjects of study and the present profession of the respondents. On both the items the chi square and CR values are significant and Ho has been rejected. A majority of doctors shows agreement between their subjects of study both at the school and college levels and the choice of their occupation. The finding is in line with our findings in the case of inter-group comparison and the analysis offered there holds good here also.

All the remaining chi square and CR values are insignificant and Ho accepted. In the case of doctors, as has already been pointed out, the number of subjects was small and whenever the smaller frequency was ten or less than ten Yate's correction for continuity had to be applied, rendering the chi square value insignificant and Ho accepted.

Although all the results on item 4DEF are statistically insignificant (table 153) and not much reliance can be placed on simple percentages and proportions, yet it may be pointed out that those doctors who reported social and humanitarian grounds for the choice of their occupation were larger in number than those who did not.

Items 4JNO and 4KQ refer to power and authority and monetary considerations respectively. On both the items all the three statistical tests (table 153) give insignificant results, showing that these considerations do not differentiate those doctors who chose their occupation under these influences and those who did not.

Item 4Clmn refer to one's own suitability, experience, interests and abilities. All the statistical tests (table 153) give insignificant results showing that these considerations do not differentiate doctors in their occupational choice.

Item 4 AB and 4 GHIT refer to identification with people engaged in the same profession and pressure and advice of other persons respectively. Results in table 153 and insignificant and fail to differentiate those who were influenced by these factors and those who were not influenced.

On items 10, 12, 13 and 14 the results of all the statistical tests

are insignificant (table 153), and the analysis done in the case of inter-group comparisons hold good here also. It may be pointed out that all the indirect measures of satisfaction, i.e., items 10, 13 and 14 show that a majority of those who entered medical profession were satisfied with their occupation and a vast majority desired that its progeny should also enter the same profession.

Item 20 refers to a choice of occupation after high school, although all the statistical tests give an insignificant result (table 153) it may be pointed out that in the case of inter-group comparison of the Doctor-Engineer group a very large number of engineers as compared to doctors did not take a decision to choose an occupation and hence there were marked and statistically significant differences between the two groups (table 114). The doctors as a separate group are rather evenly distributed in this regard and do not show any differences within the group in making an occupational choice immediately after high school.

Item 32 refers to information regarding requirements of the job all the three tests give insignificant results (table 153) which show that there was no difference between those doctors who did or did not choose their occupation on the basis of previous knowledge or information regarding their job.

ENGINEERS:

Table 154

Consolidated results of the chi square, CR and Binomial tests applied on the data obtained from Engineer's group.

Item	Chi square value in table II	CR in table 150	Decision on Ho in in table 145
A	19.600**	4.430*	Rejected
3	0.400	0.632	Accepted
4DEF	0.100	0.316	Accepted
4JNO	0.400	0.6.32	Accepted
4CMV	0.900	0.949	Accepted
4AB	6.400*	2.531*	Rejected
4GHIT	3.600	1.898	Accepted
4RSu	25.600**	5.063**	Rejected
4K[illegible]	0.400	0.632	Accepted
5	19.600**	4.430**	Rejected
10	0.400	0.632	Accepted
12	1.600	1.265	Accepted
13	0.400	0.432	Accepted
14	0.900	0.949	Accepted
16	14.400**	3.797**	Rejected
17	2.500	1.582	Accepted
18	19.600**	4.430**	Rejected
19	14.400**	3.797**	Rejected
20	14.400**	3.797**	Rejected
22	0.900	0.949	Accepted
25	19.600**	4.430**	Rejected
26	25.600**	5.063**	Rejected
32	4.900*	2.215*	Rejected

On item 'A' (Table 154) which refers to the indirect influences of fathers' occupation on the occupational choice of the son we find that all the three statistical tests give significant result (table 154). A large number of engineers was not influenced by the occupation of father hence there were significant differences in this regard. The analysis offered in

the case of inter-group comparisons holds good here also.

Items 4AB, 4 BSU and 5 refer to identifications with people, environmental pressures like economic factors lack of opening etc. and traditional profession of the family. On all the three items we find significant results (table 154). A larger proportion of engineers as a group was not influenced by any of these factors. Explanations put forward in the case of inter-group comparisons hold good for all the three items.

Items 16 and 19 refer to the childhood mock-roles and favourite vocations of childhood respectively. All the three tests give significant results on both these items (table 154). In both the cases the significance is negative, i.e., a much larger proportion of engineers did not choose their vocation as a result of these childhood influences. Analyses put forward in the case of inter-group comparison hold good here also.

Item 18 refers to the level (school or college) at which a decision was taken to enter a profession. Our result on this item is highly significant (table 154), showing that a vast majority of engineers took a decision to enter a profession at the college level only. Analyses put forward in the case of inter-group comparison hold good here also.

Item 20 refers to the decision to enter a vocation immediately after high school. The results arrived at by the application of all the three statistical tests are significant (table 154), showing that a larger proportion of engineers did not take even a tentative decision to join a vocation after high school. This finding is the same as in the case of inter-group comparison and the same analysis holds good here also.

Items 25 and 26 refer to agreement or disagreement of occupational choice with the subjects of study taken at the high school and college levels. The results of all the statistical tests are significant (table 154) showing that a vast majority of engineers opted for the subjects of study both at the school and the college levels which were in harmony with the profession they adopted.

Item 32 refers to previous information regarding the requirements of one's job. Statistical test results are just significant (table 154) that too at 5% level, showing a larger proportion of engineers having information regarding the requirements of their job. This is the only group in the case of which a slight significance is found to exist on this item. However, it seems improbable that except very superficial information, there would have been proper knowledge regarding the job requirements in the case of engineers. Another possibility is that this question might have been misinterpreted by engineers as information before "immediately" entering it, hence the significance of the results.

On all other items the results of all the statistical tests are insignificant (table 154). Advice of parents and other relative, item 3, did not exert a determining or differentiating influence on those engineers who did or did not choose engineering as their profession on this basis.

Items 4DEF, 4JNO and 4KQ refer to social and humanitarian considerations, consideration of power and authority and monetary considerations respectively. No statistically significant results are found to exist,

showing that these factors do not differentiate engineers in their occupational choice.

Engineers show no differences in making their occupational choice on the basis of consideration of their own suitability for the job, their own interest in it or experience of it and on the basis of advice of other persons (items 4 CLMV and 4 CHIT).

Items 10, 12, 13 and 14, again, do not differentiate engineers in so far as their satisfaction or dissatisfaction with their job is concerned. All these items provide measures of satisfaction, directly or indirectly, in the case of engineers there seem to be some factors which have exercised certain restraints on this group replying these items. Analyses and explanations put forward in the case of inter-group comparisons hold good here also.

Item 17 refers to the stage (school or college) at which boys become aware of earning a living. No significant differences are found to exist in the case of the engineer group of our sample as far as awareness to earn a living at school or at college is concerned. In other words, an equal number of those who chose engineering as their profession was aware to earn a living at the school and the college levels. Analysis of this trend in the case of inter-group comparisons holds good here also.

Item 22 refers to teachers' influence in the vocational choice of the taught. On this item our engineering group shows no statistically significant difference. Although, speaking in terms of proportions

only, a larger number of engineers shows the influence of teachers in their occupational choice.

LAWYERS:

Table - 155

Consolidated results of the chi square, CR and Binomial tests applied on the data obtained from Lawyer's group.

Item	Chi square value in Table III	C.R. in Table 151	Decision on Ho in Table 146
A	29.490**	5.437**	Rejected
3	0.156	0.397	Accepted
4DEF	3.946*	1.989*	Rejected
4JNO	2.964	1.724	Accepted
4CLMV	0.156	0.397	Accepted
4AB	5.070*	2.254*	Rejected
4GHIT	7.736**	2.931**	Rejected
4RSU	0.156	0.397	Accepted
4KQ	0.156	0.397	Accepted
5	6.332*	2.519*	Rejected
10	5.070*	2.254*	Rejected
12	0.858	0.028	Accepted
13	0.016	0.132	-
14	26.684**	5.172**	Rejected
16	0.156*	0.397	Accepted
17	26.684**	5.172**	Rejected
18	35.526**	5.968**	Rejected
19	21.490**	4.641**	Rejected
20	26.684**	5.172**	Rejected
22	2.122	1.458	Accepted
25	19.104**	4.378**	Rejected
26	24.016**	4.907**	Rejected
32	2.122	1.458	Accepted

On item A all these statistical tests give significant results (table 155). A large proportion of lawyers was not influenced by the fathers' occupation in choosing its own career. This result is in line with our earlier findings and the analysis offered in case of inter-group

comparisons hold good here also.

On item 3 we find that the results are statistically insignificant (table 155) showing that about an equal number of parents and relatives advised the younger generation to adopt law as a profession. Interpretation presented in the case of inter-group comparison on this item for lawyers and as compared to other groups hold good here also.

From among the items 4 DEF (Social and humanitarian considerations), 4 JNO (consideration of power and authority) and 4 KQ (monetary consideration), the first one gives a statistically significant result in the negative direction (table 155) i,e,, a larger proportion of lawyers did not choose their occupation on social and humanitarian grounds, whereas the latter two give insignificant results showing that about an equal proportion was influenced by considerations of power and authority and monetory considerations in choosing law as their profession. Interpretations presented in the case of inter-group comparisons hold good here as well.

Item 4 CLMV refers to the role of one's own suitability, experience, interest and abilities in choosing an occupation. Statistical results are found to be insignificant on this item (table 155). This shows that these subjective factors were not responsible for the occupational choice of any significant number of lawyers in our sample. Analysis and interpretation offered in the case of inter-group comparisons hold good here also.

On items 4 AB (identification with people in the same profession)

4 GHIT (pressure or advice of other persons). Statistical results are significant (table 155). But on both the items a larger proportion of lawyers gave negative replies. A lack of identification in the case of lawyers during the pre-independence era remains to be explained. This is a result which cannot be expected under ordinary circumstances, but when we consider the occupational atmosphere of the early thirties of this century in our country and the socio-economic background of the people who could afford to educate their children, we find that clear goals on the part of both the elders and the youngers regarding occupational future were conspicuous by their absence. Those who were attracted to the study of law came from well to do or petty feudal families and earning a livelihood from sources other than family coffers was not the aim of many of them. These people studied law, perhaps, not to practice as independant lawyers but to become Tehsildars and Deputy Collectors etc. Under such circumstances absence of identifications with professional lawyers was natural and obvious. For the same reasons pressures or advice of others was also not a discriminating factor in favour of law as a profession.

On item 4 RSU (socio-economic handicaps) all statistical results are insignificant (table 155), showing that these factors do not differentiate between those lawyers who did and those who did not choose law as a profession on the basis of these factors. Explanations presented in the case of inter-group comparisons hold good here also.

On item 5 (traditional profession of the family) all the statistical results are significant (table 155) in a negative direction, showing that a large proportion of lawyers did not choose law on the basis of its being the traditional profession of the family. Explanations offered earlier in the case of inter-group comparisons hold good here also.

On items 10 (could have earned more money in some other profession), 12 (satisfaction with the present profession), 13 (sufficiency of income for the education of children) and 14 (desire to enter children in the same profession) we find that the statistical results are significant for the first and the last items and insignificant for the other two (table 155). A larger proportion of lawyers reports that they would have earned more money in some other profession and that they do not want their children to enter the legal profession, showing a dissatisfaction with the present state of their profession. Although about an equal proportion of lawyers reports that the income is sufficient for the education of children and that they are satisfied with the profession, the over all picture remains the same as explained in the case of inter-group comparison.

On items 16 (childhood mock-roles) and 19 (favourite vocations of childhood) all the statistical tests give insignificant and negatively significant results respectively (table 155). The favourite vocations of childhood of our lawyer sample did not differentiate those whose ultimate choice agreed with the childhood mock-roles and those whose choice did not agree with the occupational mock-roles played during childhood, and a large proportion of our lawyer sample did not have law as their favourite vocation during their childhood. The preceeding interpretation

offered on items 4 AB and 4 GHIT in the case of within group analysis (page 195) holds good for these items also.

On items 17 (awareness to earn a living) and 18 decision to enter a profession) the statistical results arrived at are significant (table 155). A very large proportion of the lawyer group became aware to earn a living at the college level, as also decided to enter a profession at the college level only. Explanations offered in the case of inter-group comparison hold good here also. On item 20 (occupational choice after high school) the statistical result is significant in a negative direction (table 155), showing that a large proportion of lawyers did not even take a tentative decision to enter a profession after high school, which goes along with items 17 and 18 and the same analyses hold good here also.

As far as teacher's influence on the occupational choice of the taught (item 22) is concerned we find that the result is statistically insignificant (table 155), distributing lawyers rather evenly between those who were and those who were not influenced by their teachers in adopting law as a profession.

On items 25 and 26 (school subjects and college subjects of study and the present profession) the statistical results are significant (table 155) showing that the subjects of study at both the school and the college level were in harmony with the ultimate choice of law as a profession. Explanations offered in the case of inter-group comparison hold good here also.

On item 32 (information regarding the requirements of the profession) the statistical results are insignificant (table 155), showing information or knowledge regarding job requirements did not influence the choice of law as a profession.

TEACHERS

Table - 156

Consolidated results of the chi square, CR and Binomial tests applied on the data obtained from Teacher's group

	Chi square value in table IV	CR in table 152	Decision on Ho in 147
A	40.250**	6.341**	Rejected
3	22.614**	4.761**	Rejected
4DEF	16.614**	4.081**	Rejected
4JNO	13.128**	6.628**	Rejected
4CLMV	20.512**	4.535**	Rejected
4AB	1.282	1.133	Accepted
4GHIT	10.050**	3.174**	Rejected
4RSU	2.512	1.587	Accepted
4KQ	22.614**	4.761**	Rejected
5	34.666**	5.895**	Rejected
10	11.538**	3.401**	Rejected
12	2.512	1.587	Accepted
13	1.846	1.360	Accepted
14	43.128**	6.575**	Rejected
16	22.614**	4.761**	Rejected
17	27.128**	5.215**	Rejected
18	34.666**	5.895**	Rejected
19	0.460	0.680	Accepted
20	29.534**	5.422**	Rejected
22	40.204**	6.349**	Rejected
25	40.204**	6.349**	Rejected
26	46.152**	6.802**	Rejected
32	0.050	0.226	Accepted

Item 'A', on which all the statistical results are significant in a negative direction (table 156) shows that fathers occupation did not exert

any determining influence on the choice of occupation of those who became teachers. Interpretations offered in the case of inter-group comparisons hold good here also. For item '3' also the statistical results are significant in a negative direction and the previous analysis holds good in this case also.

On items 4DEF, 4JNO and 4KQ all the statistical results are significant (table 156), showing that all three value systems viz, social and humanitarian considerations, considerations of power and authority and monetary considerations exerted a determining influence on teachers in the choice of their occupation. Rosenberg's study (23) and many other studies have shown that considerations of power and authority (item 4JNO) and monetary considerations (item 4KQ) have a positive relationship with each other and go together. Item 4DEF is also going along with these items in the case of our results, this as has already been pointed out may be the result of patriotic and national sentiments during the period in which our subjects were faced with making a choice.

A large proportion of teachers reported considerations of suitability, interest and abilities etc. (item 4CLMV) as reasons for their choice of the teaching profession rendering the statistical results significant (table 156). Explanations put forward in case of inter-group comparisons hold good in this case also.

On items 4AB (identification with people in the same profession) and 4GHIT (Pressure of other persons) statistical results are found to be insignificant and significant in a negative direction respectively

(table 156) showing that both these items did not exert a determining influence in the occupational choice of teachers. Analyses offered in the case of inter-group comparisons hold good here also.

On item 4RSU (environmental pressures) all statistical results are insignificant (table 156), showing that these persons did not influence the choice of teaching as a profession in the case of our teacher group. Previous analysis in the case of inter-group comparison holds good in this case also. On item 5 (traditional profession of the family) we find that the result is significant in a negative direction (item 156), showing that a large proportion of teachers did not choose teaching simply on the basis of a family tradition. It seems that (as supported by our result on 4 DEF, 4JNO etc) teachers in choosing their occupation were much more guided or influenced by certain ideals and an idealism coupled together with some realistic considerations (item 4KQ) rather than by suhh extraneous factors as the traditional profession of the family.

Item 10 (could have earned more money in some other profession) gives a significant result, items 12 (satisfaction with the present profession) and 13 (sufficiency of income for the education of dependents) give statistically insignificant results, whereas item 14 (entering children in the same profession) gives a significant result in the negative direction (table 156). All the four items show that on no criterion direct or indirect our teacher group is satisfied with its profession. Analysis and interpretations offered in the case of inter-group comparisons hold good here also.

On items 16 (childhood mock-roles) and 19 (favourite vocation of

childhood) the statistical results are significant in a negative direction and insignificant respectively, showing that the childhood mock-roles did not exert a determining influence on the choice of occupation of our teacher group and the favourite vocation of childhood had no significance in differentiating those teachers who favoured teaching in their childhood and those who did not. It may be preferred here that the importance of occupations, other than the traditional ones and a few official positions, was not considered important enough to impress upon the younger generation during the twenties and early thirtis of this century in our country, it was at least not generally recognised, a few families here and there might have realized the importance of professions in that period.

On items 17 (awareness to earn a living) and 18 (decision to enter a profession) the statistical results are found to be significant (table 156). On both the items it is found that a large proportion of teachers became aware to earn a living and to enter a profession when they reached college, at the school level there was no such awareness to earn or to enter a profession. Analysis offered in the case of inter-group comparisons holds good here also.

On item 20 statistical results are significant in a negative direction (table 156), showing that a very large proportion of teachers did not take a decision regarding occupational choice after high school. Analysis offered earlier in the case of inter-group comparison holds good here also.

On item 22 (influence of teacher) all statistical results are found

to be significant (table 156), showing that a very large proportion of our teacher-group reports that it was influenced by their teachers in deciding upon teaching as a profession. Analysis and interpretations offered in the case of inter-group comparisons hold good here also.

On item 25 and 26 (present profession and subjects studied at high school and college respectively) statistical results are significant (table 156), showing that the choice of school and college subjects was in harmony with the ultimate profession chosen by our teacher group, according to the criteria fixed and explained in the case of inter-group comparison, which hold good here also.

On item 32 (information regarding the requirement of job) all statistical results are insignificant (table 156), showing that on this item our teacher sample was distributed according to the curve of chance showing no difference between those who had and those who did not have information regarding the requirements of their job. Analysis offered earlier in the case of inter-group comparisons holds good here also.

III. <u>Combined Professional Group as a Whole</u>:

In analysing the data obtained from the Combined Professional group as a whole a combination or clustering of items has been effected in order to make the interpretation brief and precise and in view of the fact that certain items tap certain aspects of the same factor in different forms and therefore can be combined together for purposes of discussion and interpretation without limiting the scope, importance or value of any of the items. It may, however, be pointed out that as far as statistical analysis of this section is concerned there is no change in the manner in which it has been done in the case of the other two sections viz. Inter-group Comparisons

and Item-wise Comparison of each separate group. The chi square for each item has been worked out and its details are given in appendix 'D' of the thesis.

Items A, 3, 4GHIT, 4AB and 22 have been combined together for the purposes of analysis in this section and termed "Personal Influences". Items 16 and 19, although related to Personal Influences, are treated separately as these items are mainly concerned with the childhood of the respondents of this study. These two items together have been termed "Early Occupational Influences". Items 4 DEF, 4JNO, 4KQ and 5 when combined together are termed "Value Systems". Items 17, 18 and 20 have been combined together and termed "Decision making Stages". Item 4 RSU is treated separately and termed "Socio-Economic Handicaps". Items 4 CLMV, 25, 26 and 32 have been combined together and termed "Occupational Preparation". While items 10, 12, 13 and 14 have been treated together and termed "Job Satisfaction."

Table - 157

Consolidated results of the chi square and the Binomial Tests applied on the Data obtained from the Combined Professional Group.

Item	Chi square Value in table V	Decision on Ho in Table 148
A	103.680**	Rejected
3	2.420	Accepted
4DEF	3.920*	Rejected
4JNO	3.920*	Rejected
4CLMV	15.680**	Rejected
4AB	8.820**	Rejected
4GHIT	21.780**	Rejected
4RSU	20.480**	Rejected
4KQ	14.580**	Rejected
5	64.980**	Rejected
10	6.480*	Rejected
12	1.620	Accepted
13	0.320	Accepted
14	33.620**	Rejected
16	35.280**	Rejected
17	58.320**	Rejected
18	92.480**	Rejected
19	30.420**	Rejected
20	62.720**	Rejected
22	35.280**	Rejected
25	81.920**	Rejected
26	103.680**	Rejected
32	5.780*	Rejected

All items, except item 3, included under the category "Personal Influences" give statistically significant results and among all the significant items only item 22 gives a positively significant result, the remaining ones giving negatively significant results. These results show that the role of key persons like father, relatives and friends in directing the young hopefuls in making an occupational decision in our country during the pre-independence era did not play any important part. The only possible exception being the teacher who by virtue of his professional status did exert a determining influence in directing the vocational decisions of the youngmen under his charge at the school and the college levels. Non-professional fathers and traditionally hide-bound relatives in the higher socio-economic echelons of our country were obviously not properly equipped to influence, advise or exert any desirable pressure in the direction of professional training and preparations regarding which they themselves had no knowledge and experience. Teachers, on the other hand, had a much broader experience and definitely more knowledge regarding the professional careers, and in the absence of any organized programmes of educational and vocational guidance they were the only available experts in their field. A large number of American studies, e.g., Sisson (24), Anderson (25), Kroger (26) and Sparling (27) reached the conclusion that father's occupation or parental advice or suggestions do not play a significant role in the occupational choice of the sons, whereas Korner (28) points out that occupational ambitions are mainly influenced by teachers. While explaining the absence of the influence of key persons in the occupational choices of our professional group it may be pointed out that

the importance and the social prestige of many professions was not as well recognised in a country of feudal background and industrial backwardness as it was in the U.K. or the U.S.A. and, for that matter, as it is today even in this country.

Items on early occupational influence also give negatively significant results by both the statistical tests. In a society in which many of these professions were comparatively unknown and enjoyed no social prestige or importance children cannot be expected to be lured by them. The mock-roles they might have played and vocations they might have aspired for in their childhood shall also be in fields the social prestige and importance of which have been established in their social setting -- such professions in those days were mostly government service like being a Deputy Collector or a Deputy Superintendent of Police, etc. It is, therefore, found that most of the professions included in this study did not exert any influence on our subjects during their childhood in the direction of an occupational choice. It seems pertinent to quote from Adler (29) on this point. He states "A mother is the first influence in the development of her children's occupational interests. The efforts and training of the first four or five years of life are decisive for the child's main sphere of action in adult life ..... In many instances, no doubt, the child continues to develop unaware of these subtle influences that continue to find expression in his acts and decisions".

It will surely be widely off the mark to expect Indian mothers of

the early twenties and thirtis to implant occupational notions in line with these professions in the minds of their children, even most fathers and other persons in the immediate environment of most of our respondents cannot be expected to preach and propagate any of these professions as an ideal. It seems that, although, the early childhood influences did not play a part in focussing on or conceptualizing these specific professions but definitely moulded our respondents in the direction of modern education which was perceived as the means of moving up the social and occupational ladder. This was true, at least in part, because educational achievements were closely related to and legally required for the individual's occupational and professional attainments. It was, perhaps, at a later stage that there might have come "..... an inciting moment, some experience so fully in accord with ..... deeply planted neural patterns that an occupational concept in terms of his own interests and desires takes sudden and clear form in a youth's conciousness." (Adler (30).

All items included under the category "Value Systems" give statistically significant results in a positive direction except item 5 which is negatively significant. An occupation or for that matter even an occupational choice reflects the value systems, the needs, and the motivations of an individual. These choices are, in effect, the end-product of individual development and the bridge by which a particular pattern of individual development crosses over to its major social role -- occupational status — in a socio-cultural setting. Any social role must be commensurate with intrinsic as well as extrinsic goals set by the self and the society in order to give a sense of purpose and security to the individual. Humanitarian and social considerations or social welfare provide a measure of

internalized value systems prescribed by a culture. Considerations of Power, Authority and Independence represent the intrinsic or subjective value systems emphasizing the need to direct one's own behaviour and that of others rather than to be subject to the direction of others. Monetary considerations refer to the socio-economic status of the individual representing an important aspect of extrinsic value systems, which emphasize the need to maintain one's self and one's family in accordance with certain group standards with respect to material matters. On all these considerations we find our respondents' replies being significant in a positive direction, while on the traditional profession of the family, adherence to which shows an orthodox approach and need to adhere to past traditions, we find a negatively significant result. Had traditionalism had a hold on our respondents it would not have been possible for them to aspire for the professions, which, as has been earlier pointed out, could not have been the traditions of their families.

It is, however, possible that on the part of those who enter certain specific professions like medical, engineering, legal or teaching, one sort of value orientation might have a predominance over the other sort of value orientation. But when all these professions are lumped together all these value systems become significant in exerting a determining influence regarding the choice of profession. It may be emphasized here that, although, some studies have pointed out that values like power and authority and monetary consideration go together, the possibility of other values like social welfare and humanitarian considerations combining in a cluster with seemingly different sort of values cannot be ruled out.

We, however, find that all these value orientations were present among our respondents on the whole. One of the possible reasons of this combination may be that different occupational groups included in this sample have emphasized different sets of values as a result of which in the analysis of the combined professional group's data all of these value orientations have shown a positive significance.

All statistical results are found to be significant on items grouped under the category "Decision Making Stages". It is found that very few of our respondents made a decision immediately after passing their high school examination to enter any specific vocation. Most of the respondents became aware to earn a living and to enter a profession at the college level. A perusal of the literature on this aspect of the problem of occupational choice shows that there are many factors, e.g., general economic conditions, family pressures, socio-economic status, vocational guidance and vocational information etc. which help or hinder the making of an occupational choice. Awareness to earn a living and decision to adopt a profession require some maturity on the part of the individual, which is not only the result of biological development but also depends, to a large extent, on the experience, education, general information and knowledge that an individual acquires during developmental process. College education opens up broader occupational vistas to the individual and by the time an individual reaches college he becomes better equipped and more mature to make professional decisions.

Statistical results on the category "Socio-Economic Handicaps" are found to be negatively significant, showing that a vast majority of

the respondents was free from socio-economic handicaps in making an occupational choice. A large number of our respondents belonged to the upper middle class group and hence by and large were free from poor economic conditions or financial stringencies, and at the time when they made their choices there were plenty of openings in all these professions. Under such conditions occupational choices were obviously not forced upon our respondents due to socio-economic handicaps.

All items included in the category "Occupational Preparation" give positively significant results on both the statistical tests applied on the data of the combined professional group. These results show that the respondents of this study had a good general preparation to enter the professions. The subjects of study opted for at the school and the college levels were, by and large, in harmony with the educational requirements of the professions chosen. The subjective feelings of suitability, interest and abilities were also in the same direction, showing that apart from the educational preparation they were making, they had also some interest in the same direction. Although, some of the studies reviewed have shown that 'liking for the job', 'I am interested in the job', etc. prove to be stock answers on the part of those who have no other choice or lack the abilities and other requirements for the professions, it may be pointed out that the respondents of this study coming from the background as they were, seem to be in a better position to complete the long and expensive training and other facilities required to enter these professions. A significantly large number of them reports that they had some information regarding the requirements of their jobs

before entering it. The requirements of undergoing some practical training before entering many of the professions included in this study must have imparted sufficient information regarding the requirements of the job to our respondents. Had this knowledge been gained by the respondents before irrevocably committing themselves to the professions their choice might have been different or more realistically arrived at than in the case when the information is imparted at the fag end of the whole process of occupational decision making.

The four items included under the category "Job Satisfaction" give different results. On item 10, a possitively significant result is obtained, items 12 and 13 give statistically insignificant results, whereas item 14 is negatively significant. This shows that the professional group as a whole feels that it would have earned more money in some other profession than the one adopted. That they are not satisfied by their present professions and that their income is not sufficient for the education of their children and other dependents. The professional group as a whole does not want its progeny to follow the same profession in which they themselves are engaged.

This is rather depressing picture regarding job satisfaction on the part of the professional group as a whole. It seems that the inclusion of law and teaching in the professional group has tilted the balance against job satisfaction on the whole. These two professions have lost much of their charm during the process of industrialization and increasing competition to achieve a satisfactory level of performance and adequate

monetory returns. Over-crowding and sub-standard enterants in some of the professions have detracted from their social prestige and importance. These considerations to a large extent may account for the lack of satisfaction on the part of the professional group as a whole. Moreover, the present economic depression and rising cost of living has rendered the monetary returns inadequate to maintain a standard of living which the professional group enjoyed and has become accustomed to maintain in order to keep its professional dignity. Although over all remunerations have increased to a large extent but the cost of living index has leaped up at a much higher rate. Monetary returns and other facilities which were adequate in many respects, no more remain so and, therefore, dissatisfaction with the source of livelihood and maintaining a social standard is natural and obvious.

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CHAPTER VI

SUMMARY AND CONCLUSIONS

I

The purpose of this investigation, which deals with the factors — social and psychological — influencing the vocational choice of the educated in the professions of medicine, engineering, law and teaching, was to undertake a survey of a representative sample of those who had entered these four professions in order to find out what considerations, pressures, advices and other factors determined the choice of their occupation, and how did those entering one profession differ from those who entered any of the remaining three professions.

In modern society one's occupation is the most important single means by which one earns a living and maintains a social status. The ever increasing complexity of the world of work demands an increasing care, planning and a scientifically established basis for the choice of such an all engaging activity as one's occupation.

The recognition of the importance of occupational choice and a need to establish a scientific basis for it has given rise to the movement of Vocational Guidance and Occupational Psychology. During the last decade or so our country has seen the development of

Vocational Guidance Bureaus, but their number is too small to be effective in such a large country as ours. Moreover, no attention has been paid to the process of occupational decision making in this country. Even in the United States of America it is a , compamatively, new field, and studies conducted in the field of occupational choice have mostly been concerned with the school or college population alone. As far as our own country is concerned no studies have been conducted to determine the reasons for the choice of an occupation. Any scientific study in this field must, first, find out the existing practices regarding occupational choice so that the shortcomings of the procedure could be eliminated and improved techniques developed.

An individual must be viewed as a dynamic entity living in a socio cultural setting coming from a particular family with specific background and value systems. The social pressures working in and the standards set by his group are potent forces which lead him to make a particular occupational choice. These pressures, practices and traditions must be taken into consideration along with his abilities and interest to work out a satisfactory basis for an occupational choice.

Entry into the professions requires university education and the present explosion of numbers at the university level has brought to light serious difficulties at the national level for educational policy, which aims at the proper utilization of our man-power resources. The problem of educated-unemployed and a proper deployment of national man-power require that much more dareful study of the factors influencing vocational choice of the educated should be undertaken. This study is only a small step in that direction. More large scale studies at

different levels may prove a great help in the proper planning and utilization of our man-power resources.

The basic assumption with which this study was undertaken, and which the results of this study confirm, was that there is a great waste of individual and social resources as a result of the manner in which individuals currently reach decisions about their occupations. There is waste in their failure to make the most of their capacities, of the educational opportunities offered and of the many other resources that the society makes available to the individual. But there seems to be little prospect of understanding the reasons for the occurrence of such waste and to initiate efforts necessary to reduce it, untill the way in which occupational choices are made is understood. It is hoped that the findings of this study will stimulate investigations into this complext but important process of how individuals decide about choosing their occupations.

II

A survey of some earlier studies has shown that almost all studies in the field of occupational choice have concentrated on school and college students. As far as the problem investigated in this study is concerned, we find an extreme paucity of literature. In

reviewing the earlier studies we have come across only three studies, one by Clark(1), another by Grace(2) and the third by Terman(3). They have studied the adult population regarding some of the aspects of their occupational choice. In our own country no studie have been undertaken on this problem.

However, studies conducted on the school and college population were the only ones which could help the investigator in focussing attention on some of the important aspects which determine the occupational choice of the educated. For purposes of convenience and clarity these studies were broadly classied under eight headings regarding: (1) The time of choice (2) The type of occupations chosen (3) Vocational interests and their permanence (4) Occupational choice and individual differences (5) Intelligence and occupational choice (6) Personality and vocation (7) Influence of father's occupation on the occupational choice of the son, and (8) other influences and pressures which played a part in the occupational choice of the samples studied.

Most of the studies were concerned with one or the other of these aspects of occupational choice. In the present investigation all the aspects discerned by a study of previous investigations are included and an effort is made to build up a comprehensive picture of the factors which played a determining influence in the occupational choice of the educated in-service professional people in our country.

III

In view of the fact that almost all studies carried out in this field have used the questionnaire technique for collecting data, and that questionnaire remains to be the most feasible technique in survey type of studies, a comprehensive questionnaire was formulated for the purposes of this study. The questionnaire was tried out on a small sample and was modified and improved for final use in this study. Most studies have investigated particular aspects of the problem of occupational choice and have been content with using simple percentages in analysing and interpreting the data obtained. This investigation tries to tackle the problem of occupational choice in its various aspects in a comprehensive manner and has employed various sophisticated statistical techniques in analysing and interpreting the data obtained.

In order to analyse the data three statistical techniques have been employed viz., the chi square, the Binomial test and the Critical Ratio or t. Most studies in the behavioural sciences do not conform to the basic assumption of normal distribution of data for making use of the large number of parametric statistics. The importance of non-parametric statistics is being recognized, increasingly, for the use in the statistical treatment of data obtained in the behavioural science researches. Two of the statistical techniques used are, therefore, non-parametric. Critical Ratio or 't' is known to be a parametric test, but it bears a definite relation to X^2, a non-parametric test, the use of CR and X^2 provided a check against each other and, therefore, CR was

also made use of in analysing the data. All the three statistical techniques were used in order to provide independent checks for each by the other two. However, the main analysis and interpretation is based on the K^2 test.

A representative sample of 275 Doctors, Engineers, Lawyers and Teachers working in the districts of Aligarh and Agra was drawn according to the random sampling technique. The results of 200 questionnaires which were returned by the sample are analysed and interpreted in this study.

IV

The results of the statistical analysis are presented in the form of tables. At the end of the chi square tables (of tables 6 to 143) a descriptive analysis of the statistical results is given.

In the case of the analysis of data for the Inter-group comparisons the two sample chi square test has been employed and its details worked out and given in tables 6 to 143. Whereas in the case of the analysis of data for each separate group all the three statistical techniques viz., the chi square test, the Binomial test and CR have been employed. The results of the chi square test for each separate group are given in tables 1 to 4, the results arrived at by the application of the Binomial test on each separate group are given in tables 144 to 147, and the results of the Critical Ratio are

tabulated in tables 149 to 152.

In the case of the analysis of the data for the Combined Professional group as a whole, both the one sample chi square test and the large sample Binomial test have been employed. The concise results of the chi square test are given in table 5, and the results of the Binomial test are given in table 148. The detailed tables of chi square for this group are given in appendix 'D'.

V

The questionnaire administered to the sample population of this study tapped many areas and aspects of the choice making process and contained thirty four questions. Seventeen questions were taken up for analysis, question No. 4 contained 23 items which were grouped togethe according to certain categories resulting into seven grouping. In this way the total number of questions analysed and interpreted is twenty three.

In interpreting the results for the Inter-group comparisons and for each Separate group questions showing affinities with one another or coming under common categories were grouped and analysed together. While in analysing and interpreting the results of the Combined Professional Group as a whole these questions were grouped under seven

categories viz., Personal Influences, Early Occupational Influences, Value Systems, Decision making stages, Socio-economic handicaps, Occupational Preparation, and Job satisfaction.

In the case of the analysis of each separate group consolidated tables showing the result of all the three statistical tests have been given (cf table 153 to 156). Whereas table 157 gives the consolidated results of the chi square and the Binomial tests for the Combined Professional Group as a whole.

The different factors operating in the occupational choice of different groups were explained in terms of psychological effects of certain historical facts and in terms of certainms social and political conditions, actually prevailing or subjectively perceived, within the framework of our cultural milieu.

Some of the factors were found to be more effective than others in some groups, e.g., in the case of doctors social and humanitarian values were the dominent criteria of choice, whereas in the case of engineers monetary considerations played a decisive role. College was found to be the most crucial stage, in the case of all groups, for making an occupational choice. Among the personal influences which played a dominant role, in the case of all groups, in the occuptional decision making process, teacher's role was found to be most the effective.

Values systems were found to be important determinants of vocational choice. A rough pattern of certain values influencing

the choice of certain occupations was discerned. This leads to the important conclusion, pregnant with certain implications of both theoretical and practical significance that an additional basis of meaningful interpretation could be provided by a further analysis of certain value systems going along with certain types of occuptional choices or occupations.

Conclusions:

In interpreting the data obtained we have followed the scheme to compare the various professional groups comprising the sample of this study with each other, i.e., (1) inter-group comparisons in terms of similarities and differences in making an occupational choice (2) an analysis of the data obtained for each separate group, i.e., group characteristics of the professions in making an occupational choice, and finally (3) an analysis of the data obtained for the combined professional group as a whole, i.e., characteristics of the professional people in making an occuptional choice. The conclusions arrived at are also presented here in the same order and according to the same scheme.

1. Inter-group Similarities and Differences in Making an Occuptional Choice:

All the groups when compared with each other were found to be similar in so far as the influence of father's occupation

in making their own occupational choice was concerned. None of the groups were influenced by the occupation of the father in making their own occupational choice.

Choice of medicine and teaching as an occupation was advised by a larger proportion of parents and relatives respectively. Engineering and law as occupations were recommended or advised by an equal proportion of parents and relatives.

A larger proportion of teachers, as compared to other professional groups, was influenced by all the three value systems in choosing their occupation. All other groups were distributed about equally in advancing all the three value systems as reasons for their occupational choice; except that a slightly larger proportion of doctors reported social and humanitarian considerations as the basis of their occupational choice and a slightly larger propotion of lawyers reported monetary considerations as a factor influencing their occupational choice.

Subjective considerations of suitability, interest and ability were reported to be the basis of occupational choice by a larger proportion of teachers. All other groups were about equally distributed in reporting this factor as the basis of their occupational choice.

A larger proportion of all the groups reports the absence of identification with those engaged in the same profession and of the pressure of other persons as factors influencing occupational choice in these fields.

Those choosing medicine and engineering as their profession reported the absence of socio-economic handicaps in making their occupational choice, whereas, a slightly larger proportion of those entering the professions of law and teaching reported socio-economic handicaps as factors which forced the occupational choice in these two fields.

A large proportion of all the groups shows an absence of the influence of the traditional profession of the family in making an occupational choice.

A large proportion of Doctors and Engineers of this sample is satisfied with its jobs. A vast majority of both wants its sons to follow the same profession as that of its own. Whereas, a large proportion of lawyers and teachers is not satisfied with its job. A vast majority of both, lawyers and teachers, want that its progeny should not follow the same profession as it is engaged in.

A majority of doctors feels that its income is sufficient for the education of its children, whereas, a majority of engineers, lawyers and teachers feels that its income is not sufficient for the education of its children. Which shows dissatisfaction with the job they are engaged in.

A vast majority of all groups has reported absence of awareness during their school career, of a future need, to earn a living. However, a slightly larger proportion of engineers reported to have an awareness

to earn a living while they were at the school level. By the time they reach college a vast majority of all groups become aware to earn a living.

A vast majority of all groups did not report making an occupational choice at the school level, whereas at the college level a vast majority of all groups had taken a decision to enter an occupation.

A slightly larger proportion of doctors as compared to engineers, teachers and x lawyers reports making an occupational choice immediately after high school. In all other groups a larger proportion did not take even a tentative decision to enter a profession immediately after high school.

A larger proportion of all groups reports being influenced by its teachers in making an occupational choice. The teacher group of the sample of this study when compared with other groups shows that it was much more influenced by its teachers in making an occupational choice.

A vast majority of all groups shows agreement between the courses of study opted for at the school and the college levels and the profession finally adopted.

No significant differences were found to exist between any of the groups regarding the influence of the knowledge of the requirements of the job in entering a profession.

II . Group Characteristics of the Professions in the Choice of Occupation:

DOCTORS

A vast majority of doctors was not influenced by the occupation of fathers in making an occupational choice.

A significantly larger proportion of doctors chose medicine on the basis of parental advice as compared to the advice of relatives other than parents.

A vast majority of doctors was free from socio-economic handicaps in choosing medicine as a profession, and the traditional profession did not exert any significant influence on the choice of medicine as a profession.

Early job identifications and childhood mock-roles did not influence the occupational choice of our doctor group.

A vast majority of doctors became aware of earning a livilihood and of entering a profession only at the college level.

A larger proportion of doctors was influenced by teachers in adopting medicine as a profession.

A majority of doctors reports agreement between the subjects of study, both at the school and the college levels, and the choice of occupation.

A slightly larger number of doctors reported social and humanitarian considerations as factors influencing their occupational choice. Considerations of power and authority and monetary considerations fail to differentiate doctors who did and those who did not choose medicine as their profession on the basis of these factors.

The subjective feelings of possessing abilities and suitability for, interest in and experience of the job were not found to be factors working for the choice of medicine as a profession.

Doctors were not influenced by the advice of others or by their identifications with people who were in this profession or by the family tradition in choosing medicine as their profession.

Doctors show a high degree of satisfaction with their profession and desire that their children should enter the same profession.

Doctors as a professional group show that they had not taken the occupational decision immediately after high school.

Doctors as a group do not show that their occupational choice was determined by the information regarding the requirements of the job before entering the profession.

ENGINEERS

Engineers as a group were not influenced by the occupations of their fathers in making their occupational choice.

Engineers as a group were not influenced by the traditional profession of the family, environmental pressures, socio-economic handicaps, and identifications with people in the profession of engineering, in making their occupational choice.

Childhood influences did not exert a determining influence on the engineer respondents of this study.

Engineers as a group did not take even a tentative decision to enter into a profession immediately after High School. A large majority of engineer respondents decided to enter a profession at the college level only.

Engineers had an educational training both at the High School and college levels which was in harmony with their final choice of occupation.

Engineers as a group did have some information regarding the requirements of the job before entering it.

Advice of parents and relatives did not exert a determining influence on the occupational choice of the engineer group of this study.

The value systems viz., social and humanitarian considerations, considerations of power and authority and monetary considerations did not exert a determining influence on the occupational choice of engineers, nor do subjective considerations of suitability and interest or previous experience determine the occupational choice of engineers.

Engineers as a group show that they are not satisfied with their job but do want that their children should follow the same occupation as that of their own.

Engineers were not aware of earning a living at the school or the college levels. Engineers were not influenced by their teachers in making an occupational choice.

LAWYERS

Lawyers were not influenced by the occupation of their fathers in choosing law as their profession, and the advice of their parents and relatives did not detemine their occupational choice.

None of the value system viz., social and humanitarian considerations, monetary considerations and considerations of power and authority, exerted a determining influence on the occupational choice of lawyers, nor did considerations of interest,abilities, suitability or experience exert any determining influence on the choice of law as a profession.

Identifications with people in the legal profession or pressures and advice of others did not determine the choice of law as a profession.

Socio-economic handicaps did not force the choice of law on the part of our lawyer sample.

Traditional profession of the family did not influence the choice of law as a profession on the part of lawyers, nor did law was found to be the profession of the families of lawyers of our sample. The childhood mock-roles or the favourite vocation of childhood did not influence the occupational choice of the lawyer sample of this study.

Lawyers of this study are found to be dissatisfied with their profession.

Occupational preparation started only at the college level in our lawyer sample. At the high school stage there was found to be no occupational preparation.

The subjects studied at the school and college level were in harmony with the choice of law as a profession, but teachers were found to exert no influence on the occupational choice of those who entered the legal profession. There was no previous knowledge of the requirements of the job on the part of those who chose law as a profession.

TEACHERS

Father's occupation or advice of parents and relatives did not influence the occupational choice of teachers of this study.

All the three value systems viz., social and humanitarian considerations, considerations of power and authority and monetary considerations were found to exert a determining influence on the occupational choice of the teacher sample. Subjective considerations of suitability, interest, abilities and experience influenced the choice of teaching as a profession.

Identifications with those who were in the same profession and pressure of others did not influence the occupational choice of teachers.

Socio-economic handicaps did not exert a determining influence on the occupational choice of our teacher group, and occupational traditions of the family, also, did not influence the occupational choice of the teacher sample of this study.

Teachers as a group are found to be dissatisfied with their profession.

Early childhood influences did not determine the occupational choice of the teacher sample of this study.

Teachers became aware to earn a living and to enter a profession only at the college level, at the school level no such awareness was found to exist. A knowledge of the requirement of the job before entering it was absent in the teacher group of our sample.

Teachers of our teacher group exerted a determining influence on the occupational choice of the teacher sample of this study.

Subjects studied at the high school and college levels were in harmony with the occupational choice of our teacher group.

3. Combined Professional Group As a Whole:

Characteristics of the professional people in the choice of occupation.

'Personal influence', except that of the teacher, in the life of the professional group did not exert a determining influence in making an occupational choice. Nor did 'Early occupational influences' determine the occupational choice of the professional group.

'Value systems', except the traditional profession of the family did influence the occupational choice of the professional group.

Among the 'Decision making stages' college is found to be the most crucial stage for making an occupational choice for the professional group.

'Socio-Economic handicaps' did not force any occupational choice on the part of those who entered the professions.

The professional group as a whole shows a satisfactory 'occupational preparation' to enter the professions in terms of the subjects of study opted for at the school and the college levels.

The professional group as a whole exhibits a lack of 'job satisfaction'.

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APPENDIX 'A'

APPENDIX - 'A'

Re. Modified Questionnaire:

Name: Age: Address: Occupation:

Education or Technical qualifications and professional training:_____ Designation when you entered this profession:_____ Present designation:_____ Father's occupation _____

---

1. Did you have any expert psychological advice (Vocational Counselling) with regard to the occupation that you should follow?

   Yes_____ No_____

2. Did you have any expert psychological advice (educational counselling) with regard to the choice of your subjects at School, College or University level? Yes_____ No_____

3. Did you follow this advice (in 1 or 2 or both) voluntarily or grudgingly please put a check (/) mark before the proper one.

   Voluntarily_____ Grudgingly_____

4. Were you advised by your parents, Guardians, relatives or teachers in choosing your profession? Yes_____ No_____

   i. If 'yes', what was your age at that time? Years_____

   ii. What courses of study had you completed or degrees obtained at that time, please mention._____

   iii. Did you accept this choice? Yes_____ No_____

iv. Did you like it or dislike it or were indifferent, please put a check mark (/) before the proper one.

Liked _____ Indifferent _____ Disliked _____

5. (a) If 'No' in 4 will you please put a check mark(/) before the proper reason or reasons of your entering this profession.

(a) Good pay _____ (b) Good designation _____

(c) High Social Prestige _____ (d) Independent Profession _____ (e) Free from responsibility_____

(f) Many subordinates _____ (g) Service to humanity _____

(h) An outlet for my interests _____ (i) A proper opportunity to exercise my abilities _____ (j) Any other reason or reasons, please specify _____.

i. What was your age when you decided to enter this profession?

Years _____

ii. Were you forced by the circumstances to enter this profession?

Yes _____ No _____

iii. If yes above, were you compelled by:-

a) Economic factors _____ (b) Family circumstances_____

c) Opinion of the elders _____ (d) because you had no openings for the profession of your choice_____

e) Any other _____

6. Did you ever discuss your occupational aspirations and goals with your friends, relatives or others. Yes_____ No_____

7. Were you married when you entered this profession?

Yes_____ No_____

i. If yes after how much time of your marriage did you enter this profession? Years_____ months_____.

ii. Had you had any children at the time of entering your profession if so please give their number and sex?

No._____ Sons _____ Daughters _____

iii. Were you compelled by your wife to enter this or any other profession?

Yes_____ No_____

iv. Please name the profession, she wanted you to enter _____

8. Did your family have any traditions in regard of career, e.g., Legal, Civil Service, Medical etc. Yes_____ No_____

i. If 'Yes', please name the traditional profession of your family_____.

ii. Did you like this tradition? Yes____ No____

9. How many promotions as regards designation have you received since you entered this profession, please give the number _____

i. How many monetary increments have you earned, please give the number_____

10. How long had you been in this profession, Years ____ etc.

11. Do you still devote time for studies in regard to your profession, technical or otherwise, please mention hours per week. Hours per week (technical studies) Hours_____ (Hours per week (General) _____

12. Do you think that you would have earned more money in some other profession? Yes_____ No_____

13. Do you think or know that some persons who are less intelligent and less qualified than you are earning more money than you do?

Yes_____ May be _____ No_____

i. If 'No' do you think that you are earning more than persons of equal talents and qualifications? Yes_____ May be_____ No_____

14. Do you get time for rest and recreation, please give details:

Hours per week_____

i. Are you satisfied that this time is sufficient for recreational purposes: Yes_____ No_____

15. Do you think that the returns from your job provide sufficient material comforts that you need. Yes_____ No_____

16. Is your income sufficient for the education of your children and/or dependents. Yes_____ No_____

17. What is your opinion about your service-record, please put a check mark (/) before the proper one. Excellent_____ Good_____

Fare_____ Poor_____ very poor_____

18. Do you want that your children should follow the same profession as you are engaged in? Yes_____ No_____

19. Do you have any hobbies? Yes_____ No_____

i. If yes, please mention it or these:_____

20. What is the total number of your family members living at home or dependent upon you, please mention it _____

Early Childhood, School, College or University:

1. Do you remember any lullabies recited by your mother when you were an infant? Yes _____ No _____

   i. If 'Yes', have you come to know through your mother or other relatives, now, as to what was the occupational ideal if any preached in those lullabies, please mention that ideal _____

2. You might have heard some stories from an elderly person during your childhood, what characters which you came across in these stories impressed you most, please mention the type of characters _____

   i. Will you please try to give your approximate age at that time? Years_____

3. What mock-roles did you like to take in your childhood plays, please indicate by putting a check mark(/) before the proper one: (a) Soldier_____ (b)Dacoit _____ (c) Police Officer_____ (d) Judge_____ (e) Doctor_____ (f) Teacher _____ (g) Engineer_____ (h)Lawyer_____ (i) Father_____ (j) Businessmen or shopkeeper_____ (any other, please specify _____

4. Generally speaking, what were the occupational aspirations of your friends and classmates, please specify _____

5. Did you like any of your neighbour or relative because of his:-

   i) Charming personality _____
   ii) Sublime character _____
   iii) Benevolence _____
   iv) Kindheartedness _____
   v) If any other such reason, please mention _____
   vi) What was his occupation, please mention_____

6. Were you highly impressed by any of your teachers or profeasors?

Yes_____ No_____

If yes, what were his/her best characteristics, put a check mark before the proper one - or ones:

(a) Lucid expression _____ (b) very good knowledge_____

(c) Very lenient _____ (d) Very good as a man _____

(e) Very good as a teacher _____ (f) Praised by all _____

(g) Very Senior teacher _____ (h) Respected by other teachers_____

(i) Popular among students _____ (j) Any other characteristics, please mention_____

i. What subject or subjects did he teach? _____

ii. In which class were you studying at that time? _____

iii. What was your age when you came into contact with him? Years _____.

7. Had you had any hobbies during your school days? Yes____ No ____.

If 'yes' what were these, please put a check mark (/) before the proper one:

(a) Paper cutting _____ (b) Photography _____

(c) Gardening _____ (d) Stamp collection _____

(e) Clay modelling _____ (f) Autograph collection _____

(g) Butterfly collection ____ (h) Music _____

(i) Manual work (Carpentary etc.) _____

(j) Any other please specify: _____

8. In what other extra-curricular activities did you participate, please indicate by putting a check (/) mark?

(a) Debates _____ (b) Games(Please mention the name of the games) _____ (c) Sports _____

(d) Prefects organisation _____ (e) Excursions _____

(f) Scouting _____ (g) N.C.C. _____

(h) If any other please specify _____

9. What did you want to be when you were a school boy, please put a check mark (/) before the proper one: (a) Lawyer _____

(b)Medical practitioner _____ (c) Engineer _____

(d) Teacher/ Professor _____ (e) Business Manager _____

(f) Actor _____ (g) Politician _____ (h) Judge _____

(i) Writer or poet _____ (j) Any other please specify_____

10. What subjects did you study for your high school?

(1) _____ (2) _____ (3) _____

(4) _____ (5) _____ (6) _____

(7) _____

11. Did you ever change your subject of study? Yes_____ No_____

i. If so, please indicate the reason or reasons for this change by putting a check (/) before the proper ones.

(a) Did not like the subject _____

(b) Was interested in the subject offered _____

(c) Subject changed to opened a greater scope for employment _____

(d) It led to the technical study I liked _____

(e) It led to the technical study which paid more in terms of money_____ (f) Previous subject was too difficult _____ (g) Previous subject was too easy or shallow _____ (h) Parents or other advised to change

the subject _____ (i) Any other reason please specify _____

ii. Please mention the subjects left and changed to:

Subject left_____ Subject changed to_____

iii. Please specify the subjects in which you did best and worst in school if any. Did best in_____

Did worst in _____

12. If you did not have any expert advice for the choice of your school subjects, how did you choose your optional subjects?

(a) Did any body advice you in this regard? Yes_____ No_____

(b) If 'Yes' please mention who was he (Father, Teacher etc.)_____

(c) If you can recall, please give the reasons he put forward for choosing a particular subject or subjects _____

(d) If you chose the subject or subjects by yourself, please mention the considerations which guided you in this choice_____

13. What honours and distinctions (academic or otherwise) did you achieve while at School, please give details:_____

14. What could you do better than others of your age while in School, please mention it?_____

15. Had you had any hobbies during your College days? Yes ____ No ____

i. If 'yes' what were these, please put a check (/) mark before the proper one:

(a) Photography _____ (b) Gardening _____

(c) Painting _____ (d) Stamp collection _____

(e) Autograph collection_____ (f) Music _____

(g) Butterfly collection_____

If you continued your school hobby, please double check it (//), if it is not mentioned in the above list please mention it here_____.

16. In what other extra curricular activities did you participate, put a check (/) mark before the proper one or ones? (Debates

(a) Debates_____ (b) Games (Please mention the game or games)_____

_____ (c) Sports _____ (d) College or University Union or Parliment_____ (g) U.O.T.C. or N.C.C. _____

(h) If any other please specify _____

17. What did you want to be when you were a College or University student, please put a check (/) mark before the proper one?

(a) Lawyer _____ (b) Medical Practitioner _____

(c) Engineer _____ (d) Teacher Professor _____

(e) Business Manager_____ (f) Actor _____

(g) Politician _____ (h) Judge _____

(i) Writer or poet _____ (j) Any other please specify_____

18. What subjects did you offer for your intermediate classes:

(1)_____ (2)_____ (3)_____

(4)_____ (5)_____

19. What subjects did you offer for graduation (B.A. or B.Sc.)?

(1)_____ (2)_____ (3)_____

(4)_____

20. Did you engage yourself for post graduate studies (M.A., M.Sc., LL.B.)?

Yes_____ No_____

i. What was your subject (in case of M.A.or M.Sc.) please mention it?

_____

ii. Did you complete your postgraduate Studies? Yes____ No_____

21. What could you do better than other of your age while you were in College, please mention it_____

22. What subjects did you like most and least while in College subject liked most_____ subject liked least_____

23. What honours and distinctions (academic or otherwise) did you achieve at College or University level, please give details_____

24. Did you choose your occupation for any of the reasons given below? If so please check them (/). If not so, please give your reasons in blank(j).

(a) My parents or friends advised it_____ (b) My father or near relative was/is engaged in this profession_____ (c) I admired some one in this occupation_____ (d) I was spceially suitable for this_____ (e) It will pay good monetary return _____

(g) It has a high social standing_____ (h) I had previous experience or training in this occupation_____ (i) I liked or like it better than any other profession _____ (j)_____

25. How did you like your father's profession when you were a school boy, please put a check (/) before the proper one.

(a) Liked very much _____ (b) Liked_____

(c) Indifferent_____ (d) Disliked_____ (e) Disliked very much_____

i. Did any change take place in your opinion about your father's profession when you enter College? Yes_____ No_____

ii. If 'Yes' above in what direction, please put a check (/) mark before the proper one.

(a) liked very much _____ (b) Liked_____

(c) Indifferent _____ (d) Disliked_____

(e) Disliked very much _____

26. Please indicate below your past occupational experience, if any:

26_a. Had you had any information regarding requirements of your job before entering it. Yes_____ No_____

27. Will you please indicate the present income group you belong to by putting a (/) check mark, and the income group you belonged to when you entered your present profession by a double check (//), in the proper blank below.

Rs. 100 to 149 _____ Rs. 150 to 199 _____ Rs. 200 to 399_____

Rs. 400 to 449_____ Rs. 450 to 499 _____ Rs. 500 to 899_____

Rs. 900 to 999_____ Rs. 1000 upwards _____

28. Will you please write down any important factors or opinion which influenced your choice of career, provided these are not covered by this questionnaire:

_____

29. Comments and suggestions:

APPENDIX 'B'

APPENDIX 'B'

A PSYCHOLOGICAL STUDY OF THE CHOICE OF OCCUPATIONS

——:o:——

Dear Sir,

This questionnaire has been constructed in pursuance of a scientific study of 'occupational-choice-making.' The purpose of this study is purely scientific. It is expected that the results will throw light on vocational planning for the future and, to a great extent, will be helpful in reducing the evils of unemployment and misfits in occupations.

You are rquested to answer these questions as carefully and frankly as possible. *You are at liberty not to answer a question if you do not want to.* **We assure you that your replies will never be used for any other but scientific purposes and that too anonymously.**

Dept. of Psychology,
Aligarh University,
ALIGARH.

Sincerely your's
Dev Raj Vij
M. A. Syed

Note :—**You are** requested to indicate your replies by putting a check mark (√) at the proper place.

Name..... Occupation.....

Qualifications.....Father's occupation .....

Sex.....Married or Unmarried.....Religion.....

Caste..... Coming from rural or urban area.....

—— :o:——

1. Did you have any expert psychological advice (Vocational Counselling) before entering your present profession ?

Yes..... No.....

2. Did you have any expert psychological advice (Educational Counselling) for choosing your subjects of study at School, College or Uuiversity ? Please put a check mark (√) in the proper column below.

at School	at College	at University
Yes.....	Yes.....	Yes.....
No.....	No.....	No.....

2. (a) If 'No' above, please mention the considerations which guided you in the choice of your optional subjects. If any of your relatives or parents advised you in this respect, please give his/her relatiouship

3. Were you advised by any of the following in choosing your profession ? Please put a check mark (√) in the proper column below.

Parents	Gaurdians	Relatives	Teachers	Any other, Please give relationship
Yes.....	Yes	Yes.....	Yes.....	
No	No.....	No.....	No.....	

4. Please put a check mark (√) before the item or items that apply to you.
I chose my profession because :—

.....(a) My father or some near relative was engaged in this profession.

..... (b) I admired some one in this profession.

.....(c) I considered myself specially suitable for this profession.

.....(d) It offered an opportunity for service to humanity.

.....(e) It offered an opportunity for service to my nation or society.

.....(f) It offered an opportunity for service to my caste.

.....(g) My parents' wishes.

.....(h) My teacher or teachers advised to adopt it.

..... (i) My wife's wishes.

.....(j) It led to a high social status.

.....(k) It promised a handsome salary or good monetary returns.

.....(l) I had previous experience or training in this occupation.

.....(m) I was more interested in this profession than any other.

.....(n) It promised influence and authority.

.....(o) It was an independent profession,

.....(p) It did not require much labour.

.....(q) It promised a comfortable life.

.....(r) I was forced by economic factors.

.....(s) I was forced by family circunstances.

.....(t) I was forced by the opinion of the elders.

.....(u) I had no opening for the profession of my choice.

.....(v) It offered an opportunity for the expression of my abilities.

(w) Any other reasons, please mention.

5. What was the traditional profession, if any, of your family ? Please put a check mark (√) before the proper one.

(a) Law.....(b) Medicine .....(c) Business .....(d) Teaching.....

(e) Engineering.....(f) Government service.....(g) Any other, please specify.....

6. How many promotions with regard to pay, grades and designation have you received since you entered this profession ? Please give the following details.

Year of entering this profession.....

Designation at the start.....

Present designation.....

Number of the promotions in grades or designation.....

7. Do you still devote time to technical or general studies for increasing your professional knowledge and efficiency ? If so, please mention,.....hours per week.

8. Do you think that you could have earned more money in some other profession than the present one. ? yes..... No.....

9. Do you think that you are earning less money than some persons who have talents and qualifications equal to your's ? Yes..... No.....

10. Do you get time for rest and recreation ? If so please give details.

Yes..... Hours per week..... No.....

11. Are you fully satisfied with your present profession ?
Yes..... No.....

12. Is your income sufficient for the education of your children or dependents ?
Yes..... No.....

13. Do you want that your children should follow the same profession as you are engaged in ?
Yes..... No.....

14. What is the total number of your family members dependent upon you ?.....

15. What profession was suggested to you as an ideal through lullibies or stories, by your mother, grand mother etc., when you were a child ? Please mention it. _____

---

16 Did you feel that any of your brothers or sisters (including cousins living with you)

....(a) Was competing with you in matters of studies.

.....(b) Was more intelligent than you.

... .(c) Was loved more than you by the elder members of your family

.....(d) Was physically stronger than you.

.....(e) Did you have a competitive attitude or feelings of jealousy towards any of your brothers, sisters, cousins or friends in any other field, please mention that field of activity.....

17. When did you first become aware of the fact that you have to earn a living ? Please give age and class you were studying in, at that time.
Age..... Class.....

18. When did you decide to enter a definite vocation ? Please mention the vocation and your age or class at that time, irrespective of the fact whether you actually adopted that vocation or not.
Voction .....Age ....Class..... .....

19. What were your favourite vocations during your childhood and adolescence, please mention them in order of preference.
1..... 2..... 3.....

20. Did you take, at least, a tentaive descision to join any vocation after your high school.
Yes ..... No..... .....
If yes, please name the Vocation..... .....

21 Did you join a course which you left unfinished ?
Yes..... No.....
If 'yes' please name it.....

22. What mock roles did you, generally, like to take in the play activities of your childhood ? Please put a check mark (✓) before the proper ones.

.....(a) Soldier. .....(b) Dacoit. .....(c) Police officer. .....

(d) Judge. .....(e) Doctor. .....(f) Teacher .....(g) Engineer

.....(h) Lawyer .....(i) Father. .....(j) Businessman or shopkeeper.

(k) Any other, please mention .....

23. Were you highly impressed by any of your teachers ?

Yes ..... No .....

If 'yes' please mention the subject you studied with him .....

24. In what extra-curricular activities did you participate while in school, college or university, please put a check marke (√) in the proper columns.

S. No.	Extra-Curricular activity	School	College	University	S. No.	Extra-Curricular activity	School	College	University	Please mention here the particular activity in columns 7, 12, 13, 14, 15
1	Debates				10	Social work				7
2	Essay writing				11	N. C. C. or U. O. T. C,				
3	Organizing functions				12	Games				12
4	Composition of poems				13	Sports				
5	Music				14	Competitions				13
6	Art, Drawing etc				15	Any other please specify				
7	School Society eg Literary Society etc.									14
8	Unions or Prliaments etc.									15
9	Scouting									

25. What did you want to become in your life when you were a child (before entering School) ?
Please mention it here _____

_____

26. What was your professional ideal when you were in School, College or University ? Please put a check mark (√) in the columns, School, College or University.

Profession	School	College	University	Profession	School	College	University	Profession	School	College	University
Business Manager...				Actor.....				Artist.....			
Judge				Writer or Poet.....				Engineer.....			
Lawyer.....				Medical Practitioner							
Teacher or Professor				Politician.....							

Any other, please specify here.....

27. What were your optional subjects in High School ? please mention below,

1..... 2..... 3.....

4.....

28. What were your subjects for :—

(a) Intermediate. 1..... 2..... 3 .....

4..... 5.....

(b) Graduation (B.A., B.Sc., or B.Com. etc) 1..... 2.....

3..... 4..... 5.....

(c) M.A., M.Sc., M.Com. etc. 1..... .....

29. Did you ever change your optional subject or subjects in order to offer another optional in the same class ?

Yes..... No.....

(i) If so, please indicate the reason or reasons for this change by putting a ceack mark (√) before the proper ones.

.....(a) Did not like the previous subject.

.....(b) was interested in the subject changed to.

.....(c) Subject left was too difficult.

.....(d) Subject left was too easy or shallow,

.....(e) Parents or others advised to change the subject.

.....(f) Subject changed to, offered a greater scope for employment.

.....(g) Subject changed to, led to the technical study which paid more in terms of money.

.....(h) Subject changed to, led to courses which offered easy opportunities for employment.

(ii) Please mention the subjects left and changed to.

(a) Subject left.....

(b) Subject changed to.....

30. What subjects did you like most and least while in school ?

Subject liked most..... Subject liked least.....

(i) In which subject, at School, you did best and worst, please mention.

Did best in..... Did worst in.....

31. What subjects did you like most and least while in College or University ?

Subject liked most..... Subject liked least.....

(i) In which subjects, at College or University, you did best and worst, please mention.

Did best in..... Did worst in.....

32. What distinctions did you achieve while in School, College or University ?

	School	College	University
1 Positions			
2 Distinctions			
3 Medals			
4 Scholarships			
5 Games Captain etc.			
6 Monitor etc.			

33. What could you do better than others of your age while in School, College or University, please mention below.

School	College	University

34. How did you like your father's profession (in case father was not alive substitute guardian for father) when you were a school boy, please indicate by putting a check mark (√)

(a) Liked very much ..... (b) Liked a good deal.....

(c) Indifferent..... (d) Disliked to a large extent .....

(e) Disliked very much.....

(i) Will you, please, indicate how did you like it when you entered College or University.

(a) Liked very much..... (b) Liked a good deal.....

(c) Indifferent..... (d) Disliked to a large extent.....

(e) Disliked very much.....

35. Have you followed any occupation before entering the present one ?

Yes..... No.....

(i) If 'yes' please give the following information :—

Name of the occupation	Reasons for giving it up	Period of service

(ii) How did you like that occupation, please indicate by putting a check mark (√)

(a) Liked very much..... (b) Liked a good deal.....

(c) Indifferent..... (d) Disliked to a large extent.....

(e) Disliked very much.....

36. Did you have any information regarding the requirements of your present job.before entering it ?

Yes..... No .....

37. Please mention your approximate pay or income (monthly) when you entered this profession Rs.....per month.

(i) Will you, please, give an approximation of your present monthly income ?
Approximately Rs .....per month.

38. You may here mention any remark, opinion or any important factor (not covered by these questions) which might have had bearing on your choice of occupation.

39. Any comments, suggestions or criticisms regarding this questionnaire.

APPENDIX 'C'

APPENDIX 'C'

A Psychological Study of the Choice of Occupations

—:o:—

Dear Sir,

This questionnaire has been constructed in pursuance of a scientific study of 'occupational-choice-making.' The purpose of this study is purely scientific. It is expected that the results will throw light on vocational planning for the future and, to a great extent, will be helpful in reducing the evils of unemployment and misfits in occupations.

You are requested to answer these questions as carefully and frankly as possible. *You are at liberty not to answer a question if you do not want to.* We assure you that your replies will never be used for any other but scientific purposes and that too anonymously.

Dept: of Psychology,
Aligarh University,
ALIGARH,

Sincerely yours,
Kewal Krishna Pahwa
M. A. Syed

Note:-You are requested to indicate your replies by putting a check mark(✓)at the proper place.

Name.....Age..... Occupation.....

Qualifications..... Father's occupation.....

Sex..... Married or Unmarried..... Religion.....

Caste..... Coming from rural or urban area.....

—:o:—

1. Did you have any expert psychological advice (Vocational Counselling) before entering your present profession ?

Yes..... No.....

2. Did you hove any expert psychological advice (Educational Counselling) for choosing your subjects of study at School, College, University or any other institution of Higher Studies ? Please put a check mark (√) in the proper column below.

at School	at College	at University	any other institution
Yes.....	Yes.....	Yes.....	Yes.....
No.....	No.....	No.....	No.....

2. (a) If 'No' above please mention the considerations which guided you in the choice of your optional subjects. If any of your relatives or parents advised you in this respect, please give his/her relationship_____

_____

3. Were you advised by any of the following in choosing your profession ? Please put a check mark (√) in the proper column below

Parents	Gaurdians	Relatives	Teacaers	Any other, Please give relationship
Yes.....	Yes.....	Yes.....	Yes.....	
No.....	No.....	No.....	No.....	

4. Please put a check mark (√) before the item or items that apply to you.

I chose my profeesion because:—

.....(a) My father or some near relative was engaged in this profession.

.....(b) I admired some one in this profession.

.....(c) I considered myself specially suitable for this profession.

.....(d) It offered an opportunity for service to humanity.

.....(e) It offered an opportunity for service to my nation or society.

.....(f) It offered an opportunity for service to my caste.

.....(g) I was compelled by the wishes of my parents.

.....(h) My teacher or teachers advised to adopt it.

.....(i) I was compelled by the whishes of my wife.

....(j) It led to a high social status.

.....(k) It promised a handsome salary or good monetary returns.

.....(l) I had previous experience or training in this occupation.

.....(m) I was more interested in this profession than any other.

.....(n) It promised influence and authority.

.....(o) It was an independent profession.

.....(p) It did not require much labour.

.....(q) It promised a comfortable life.

.....(r) I was forced by economic factors.

.....(s) I was forced by family circunstances.

.....(t) I was forced by the opinion of the elders.

.....(u) I had no opening for the profession of my choice.

.....(v) It offered an opportunity for the expression of my abilities.

(w) Any other reasons, please mention. _____

_____

_____

5. What was the traditional profession, if any, of your family ? Please put a check mark (√) before the proper one.

(a) Law.....(b) Medicine.....(c) Business.....(d) Teaching.....

(e) Engineering.....(f) Any other, please specify.....

6. What profession was suggested to you as an ideal through lullibies or stories by your mother grand mother etc., when you were a child ? Please mention it _____

_____

7. How many promotions with regard to pay, grades and designation have you received since you entered this profession ? Please give the following details.

(a) Private Practice

Yes.....No.....

If Yes, Year of entering.....

(b) Year of entering this profession.....

Designaiion at the start.....

Present designation.....

Number of the promotions in grades or designation.....

8. Do you still devote time to technical or general studies for increasing your paofessional knowledge and efficiency ? If so, please mention,.....hours per week.

9. Do you get time for rest and recreation ? If so please give details.

Yes..... Hours per week..... No.....

10. Do you think that you could have earned more money in some other profession than the present one. ? yes..... No.....

11. Do you think that you are earning less money than some person who have talents and qualifications equal to your's ? Yes..... No.....

12. Are you fully satisfied with your present profession ?
Yes..... No.....

13. Is your income sufficient for the education of your children or dependents ?
Yes..... No.....

14. Do you want that your children should follow the same profession as you are engaged in?
Yes..... No.....

15. Did you feel that any of your brothers or sisters (including cousins living with you)
....(a) Was competing with you in matters of studies.
....(b) Was more intelligent than you.
.....(c) Was loved more than you by the elder members of your family.
.....(d) Was physically stronger that you.
.....(e) Did you have a competitive attitude or feeling of jealousy towards any of your brothers, sisters, cousins or friends in any other field, please mention that field of activity.....

16. What mock-roles did you. generally, like to take in the play activities of your childhood ? Please put a check mark (√) before the proper ones.

(a) Soldier ....(b) Judge ..... (c) Lawyer .....(d)Teacher ... ...
(e) Dacoit ....(f) Police officer .....(g) Engineer.....(h) Doctor .....
(i) Father..... ....(j)Businessman or shopkeeper ... . (k)Leader or Politician... . ...
(l) Any other, please mention..... .....

17. When did you first become aware of the fact that you have to earn a living ? Please give age and class you were studying in, at that time.
Age..... Class.....

18. When did you decide to enter a definite profession ? Please mention the profession and your age or class at that time, irrespective of the fact whether you actually adopted that profession or not.
profession.....Age.....Class.....

19. What were your favourite vocations during your childhood and adolescence. please mention them in order of preference.
1... .....2. ..... 3 .....

20. Did you take, at least. a tentaive descision to join any vocation after your high school.
Yes..... No.....
If yes. please name the Vocation.....

21. Did you join a Professional couse which you left unfinished ?

Yes..... No.....

If 'yes' please name it.....

22. Were you highly impressed by any of your teachers ?

Yes..... No.....

If 'yes' please mention the subject you studied with him.....

23. What did you want to become in your life when you were a child (before entering School) ? Please mention it here _____

_____

24. What was your professional ideal when you were in School, College or University ? Please put a check mark (√) in the columns, School, College or University.

Profession	School	College	University	Profession	School	College	University	Profession	School	College	University
(a) Businessman.....				(e) Actor.....				(i) Artist			
(b) Judge.....				(f) Writer or Poet.....				(j) Engineer.....			
(c) Lawyer.....				(g)MedicalPractitioner				(k) Police			
(d)Teacher orProfessor				(h) Politician.....				(l) Militay.....			
								(m) I.C.S. or I.A.S.			

Any other, please specify here.....

25. What were your optional subjects in High School ? please mention below.

1..... .... 2..... .... 3... ....

4 .....

26. What were your subjects for .—

(a) Intermediate. 1..... .. 2 .... 3.....

4..... 5.....

(b) Graduation (B.A.,B.Sc., or B.Com. etc) 1..... 2..... .....

3..... ..... 4..... ..... 5.....

(c) M.A.. M.Sc., M.Com.B.Sc., (Engg.) etc. 1.....

27. Did you ever change your optional subject or subjects in order to offer another optional in the same class ?

Yes..... No.....

(i) If so, please indicate the reason or reasons for this change by putting a ceack mark (√) before the proper ones.

.....(a) Did not like the previous subject.

.....(b) was interested in the subject changed to.

.....(c) Subject left was too difficult.

.....(d) Subject left was too easy or shallow.

.....(e) Parents or others advised to change the subject.

.....(f) Subject changed to offered a greater scope for employment.

.....(g) Subject changed to, led to the technical study which paid more in terms of money.

.....(h) Subject changed to, led to courses which offered easy opportunities for employment.

(ii) Please mention the subjects left and changed to.

(a) Subject left..... ....

(b) Subject changed to..... ....

28. What subjects did you like most and least while in school ?

Subject liked most..... Subject liked least.....

(i) In which subject, at School, you did best and worst, please mention.

Did best in..... Did worst in.....

29. What subjects did you like most and least while in College or University ?

Subject liked most..... Subject liked least.....

(i) In which subject, at College or University, you did best and worst, please mention.

Did best in..... Did worst in.....

30. How did you like your father's profession (in case father was not alive substitute guardian for father) when you were a school boy, please indicate by putting a check mark (√)

(a) Liked very much..... (b) Liked a good deal.....

(c) Indifferent..... (d) Disliked to a large extent.....

(e) Disliked very much.....

(i) Will you, please, indicate how did you like it when you entered College or University.

(a) Liked very much..... (b) Liked a good deal.....

(c) Indifferent..... (d) Disliked to a large extent.....

(e) Disliked very much.....

31. Have you followed any occupation before entering the present one ?

Yes..... No.....

(i) How did you like that occupation, please indicate by putting a check mark (√)

(a) Liked very much..... (b) Liked a good deal.....

(c) Indifferent..... (d) Disliked to a large extent.....

(e) Disliked very much.....

(ii) If 'yes' please give the following information :—

Name of the occupation	Resons for giving it up	Period of service

32. Did you have any information regarding the requirements of your present job, before entering it ?

Yes..... No.....

33. Please mention your approximate pay or income (monthly) when you entered this profession Rs.....per month.

(i) Will you, please, give an approximation of your present monthly income ?
Approximately Rs.....per month.

34. You may here mention any remark, opinion or any **important factor (not covered by these questions) which might have had bearing on your choice of occupation.**

APPENDIX 'D'

APPENDIX 'D'

Tables showing the obtained chi square value at 1 df for the combined professional group as a whole

A — Influence of Father's occupation

	fo	fe	fo-fe	$(fo-fe)^2$	$\frac{(fo-fe)^2}{fe}$
Same profession	28	100	-72	5184	51.840
Different profession	172	100	72	5184	51.840

chi square = 103.680 significant at 1% level

B — Advice of Parents and others

Advised by parents	89	100	-11	121	1.210
Advised by others	111	100	11	121	1.210

chi square = 2.420 insignificant

DEF — Social and Humanitarian Considerations

Adjusted	115	100	15	225	2.25
Not Adjusted	85	100	15	225	2.25

chi square = 4.50 significant at 5% level

4 JNO

Consideration of Power and Authority

	fo	fe	fo-fe	$(fofe)^2$	$\frac{(fe-fe)^2}{fe}$
Adjusted	114	100	14	196	1.960
Not adjusted	86	100	-14	196	1.960

chi square = 3.920 significant at 5% level

Consideration of Suitability for the job

4GLMV

Adjusted	128	100	28	784	7.840
Not adjusted	72	100	-28	784	7.840

chi square = 15.680 significant at 1% level

Identification with People

4AB

Influenced	79	100	-21	441	4.410
Not influenced	121	100	21	441	4.410

chi square = 8.820 significant at 1% level

Pressure of other persons

4GHIT

Influenced	67	100	-33	1089	10.890
Not influenced	133	100	33	1089	10.890

chi square = 21.780 significant at 1% level

12 **Satisfaction with the Job**

	fo	fe	fo-fe	$(fo-fe)^2$	$\frac{(fo-fe)^2}{fe}$
Yes	109	100	9	81	0.810
No	91	100	-9	81	0.810

chi square = 1.620 insignificant

13 **Personal Satisfaction**

Yes	96	100	-4	16	0.160
No	104	100	4	16	0.160

chi square = 0.320 insignificant

14 **Father and Son**

Yes	59	100	-41	1681	16.810
No	141	100	41	1681	16.810

chi square = significant at 1% level

15 **Early Job Identification**

Agreement	58	100	-42	1764	17.640
Disagreement	142	100	42	1764	17.640

chi square = 35.280 significant at 1% level

4RSU — Environment Pressures

	fo	fe	fo-fe	$(fo-fe)^2$	$\frac{(fo-fe)^2}{fe}$
Influenced	68	100	-32	1024	10.240
Not influenced	132	100	32	1024	10.240

ch square = 20.480 significant at 1% level

4 KQ — Monetary Considerations

Influenced	127	100	27	729	7.290
Not influenced	73	100	-27	729	7.290

ch square = 14.580 significant at 1% level

5 — Traditional Profession of the Family

Agreement	43	100	-57	324.9	32.490
Disagreement	157	100	57	324.9	32.490

ch square = 64.980 significant at 1% level

10 — Fulfilment of Expectations

Yes	118	100	18	324	3.240
No	82	100	-18	324	3.240

chi square = 6.480 significant at 5% level

Awareness to Earn a Living

17

	fo	fe	fo-fe	$(fo-fe)^2$	$\frac{(fo-fe)^2}{fe}$
Awareness at School Level	45	100	-54	2916	29.160
Awareness at College Level	154	100	54	2916	29.160

chi square = 58.320 significant at 1% level

Decision to Enter a Profession

18

Agreement with school level choice	32	100	-68	4624	46.240
Agreement with college level choice	168	100	68	4624	46.240

chi square = 92.480 significant at 1% level

Childhood Vocations

19

Agreement	61	100	-39	1521	15.210
Disagreement	139	100	39	1521	15.210

chi square = 30.420 significant at 1% level

Occupational Choife after High School

20

Decision	44	100	-56	3136	31.360
No decision	156	100	56	3136	31.360

chi square = 62.720 significant at 1% level

Teacher's Influence

22

	fo	fe	fo-fe	$(fo-fe)^2$	$\frac{(fo-fe)^2}{fe}$
Impressed	142	100	42	1764	17.640
Not impressed	58	100	-42	1764	17.640

chi square = 35.280 significant at 1% level

High School Subjects & Present Profession

25

Agreement	164	100	64	4096	40.960
Disagreement	36	100	-64	4096	40.960

chi square = 81.920 significant at 1% level

College subjects and Present Profession

26

Agreement	172	100	72	5184	51.840
Disagreement	28	100	-72	5184	51.840

chi square = 103.680 significant at 1% level

Knowledge of the World of Work

32

Having Information	117	100	17	289	2.890
Having no information	83	100	-17	289	2.890

chi square = 5.780 significant at 5% level